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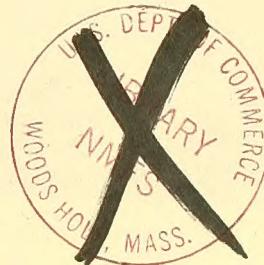
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OCEANOGRAPHIC OBSERVATIONS, EAST COAST OF
THE UNITED STATES

Joseph Chase

Woods Hole Oceanographic Institution
Woods Hole, Massachusetts

January 1969



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UNITED STATES DEPARTMENT OF THE INTERIOR

U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES

OCEANOGRAPHIC OBSERVATIONS, 1965

EAST COAST OF THE UNITED STATES

By

JOSEPH CHASE



Contribution No. 2121 from the Woods Hole Oceanographic Institution
Woods Hole, Mass.

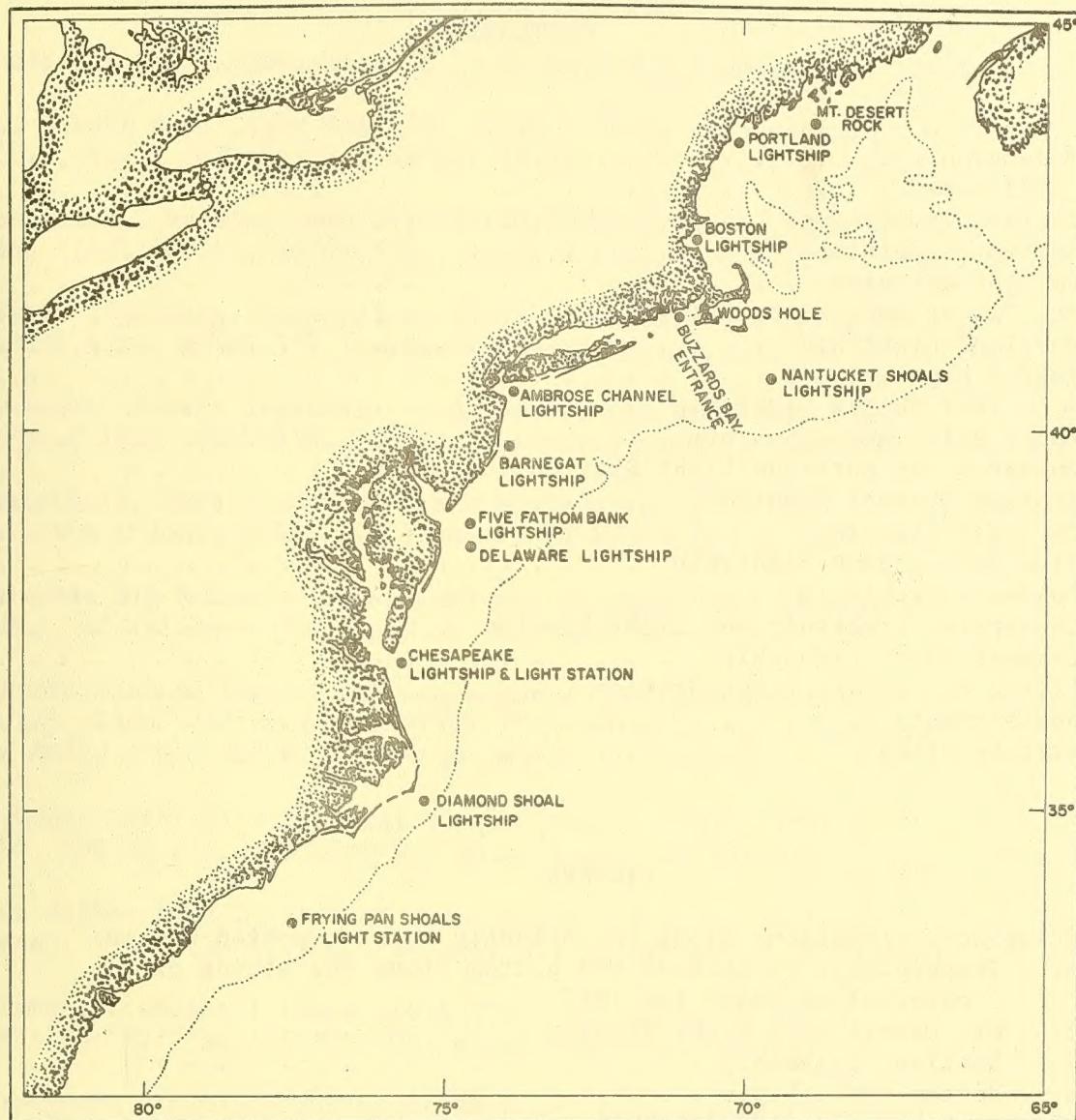
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United States Fish and Wildlife Service
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Washington, D.C.
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Frontispiece. Locations along the Atlantic Coast reported herein.

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OCEANOGRAPHIC OBSERVATIONS, 1965

EAST COAST OF THE UNITED STATES

By

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ABSTRACT

Daily water temperature and salinity observations for 1965 from 13 locations along the Atlantic seaboard are tabulated, plotted, and discussed.

INTRODUCTION

Through the cooperation of the U.S. Coast Guard, the Woods Hole Oceanographic Institution established, late in 1955, a series of oceanographic observation posts at lightships and light stations along the east coast of the United States. Additional data have been obtained from the Woods Hole Oceanographic Institution for Woods Hole, Mass.

The lightship data were forwarded to Woods Hole, where they were processed. The bathythermograms were read at several levels. Salinities were determined by salinometer. The records of air temperature, weather, wind, and clouds were used in studying the other data but are not presented here.

Parentheses have been used to enclose mean values derived from sparse data and daily temperature values extrapolated over a depth of not more than 10 feet (3 m.) beyond the bottom of the trace.

The daily data were tabulated, and mean temperatures for the several depths for three periods (decads) in each month were plotted on time-depth profiles for each station where bathythermographs were used. The decad mean surface temperatures for 1965 have been plotted beside the decad averages for 1956-64.

Decad averages of surface salinity and of bottom temperature for 1956-64 were calculated for comparison with the 1965 data.

The monthly mean surface water temperatures for 1965 for all stations are listed in table 1, for comparison with previous records (Bumpus, 1957a, 1957b; Day, 1959a, 1959b, 1960, and 1963; Chase, 1964, 1965, 1966, 1967).

Table 1.--Surface water temperature °C. - monthly and annual means, 1965

Month	Mt. Desert Light Station	Portland Lightship	Boston Lightship	Nantucket Shoals Lightship	Woods Hole, Massachusetts	Buzzards Bay Entrance Light Station	Ambrose Channel Lightship	Barnegat Lightship	Five Fathom Bank Lightship	Delaware Lightship	Chesapeake Lightship and Light Station	Diamond Shoal Lightship	Frying Pan Shoals Light Station
Jan.	3.2	2.8	-	-	+0.9	2.4	3.7	4.7	6.6	-	7.3	12.5	14.8
Feb.	2.2	0.4	1.1	3.6	-1.2	1.2	2.6	2.4	4.1	5.0	4.5	9.1	14.8
Mar.	2.1	1.8	1.8	3.6	+1.8	2.2	3.0	3.8	3.7	4.4	5.9	8.1	14.0
Apr.	2.8	4.0	3.3	3.8	5.0	4.5	5.2	-	5.9	6.2	9.6	12.7	15.3
May	5.1	8.4	9.9	6.3	11.6	9.2	11.1	13.2	11.5	12.0	13.2	19.7	21.9
Jun.	6.1	11.0	14.1	9.7	16.6	13.0	14.9	15.6	16.8	17.1	19.2	23.2	24.5
Jul.	8.9	14.6	14.9	15.6	20.3	16.8	18.6	20.4	21.8	-	23.4	26.4	26.5
Aug.	9.5	14.4	15.5	17.8	21.9	19.1	20.4	21.0	22.6	23.6	23.8	27.3	27.1
Sep.	9.8	13.0	13.6	15.0	18.8	15.9	18.4	19.8	20.4	21.1	(23.7)	27.3	-
Oct.	8.5	9.7	10.4	12.8	14.3	12.8	13.9	16.9	16.1	16.3	-	24.2	24.2
Nov.	6.8	6.7	7.6	10.1	9.2	9.6	8.5	11.8	11.0	11.6	14.4	22.2	22.3
Dec.	4.8	4.1	5.5	7.5	5.0	6.6	6.9	-	7.9	9.5	10.4	18.5	20.1
Mean	5.8	7.6	-	-	10.4	9.4	10.6	-	12.4	-	-	19.3	-

Weather maps of the U.S. Weather Bureau (1965) and a joint publication of the U.S. Department of Commerce and the U.S. Department of Agriculture (1965, 1966) were sources of information on weather.

We hope to continue the annual collection and publication of these data and should be glad to include comparable data from other locations.

This work was supported by the Bureau of Commercial Fisheries, U.S. Fish and Wildlife Service, under Contract Nos. 14-17-0007-253, 14-17-0007-376, and 14-17-0007-572, and by the Office of Naval Research under Contract No. Nonr-2196(01) with the Woods Hole Oceanographic Institution.

THE 1965 DATA

Surface Temperature (fig. 1)

Minimum surface water temperatures occurred in February at the northern observation posts. At the remaining posts there was a tendency toward double minima such that the very lowest decads occurred in January, February, or March without much regularity of pattern. The cold periods were, in general, longer at the northerly stations, however. Correspondence was usually good with air temperatures.

The surface water temperatures at Diamond Shoal were far below normal in January, February, and March. These low water temperatures were accompanied by subnormal air temperatures but not by excessive precipitation (cf. 1958).

The vernal warming was steady in most areas and was earliest in the south.

The maxima came in late July at Portland and Boston, in September at Chesapeake and Diamond Shoal, and in August at the remaining stations. At the more northerly stations the maxima were well marked in comparison with those of 1964. The correspondence with air temperature was generally good. The autumnal cooling was gradual and orderly at most observation posts and began earliest in the north.

Bottom Temperatures (fig. 1)

The lowest bottom temperatures were coincidental with those at the surface except at the more northerly lightships where the minima at these two levels were less sharply marked.

The maxima occurred between mid-September and late October. During the summer there were reversals of the warming along the middle Atlantic coast that were associated with wind (Chase 1959).

Surface Salinity

The effect of the extended drought (U.S. Department of Commerce and U.S. Department of Agriculture 1965) on salinities along the Middle Atlantic and New England coasts has been analyzed by Bumpus (1967). He found that from 1960 through 1965 there was a general rise in the annual average of salinity at most of the observation posts from Portland Lightship to Five Fathom Bank Lightship. The upward trend was particularly noticeable in the record of annual minimum salinities; whereas annual maximum salinities showed little year to year change.

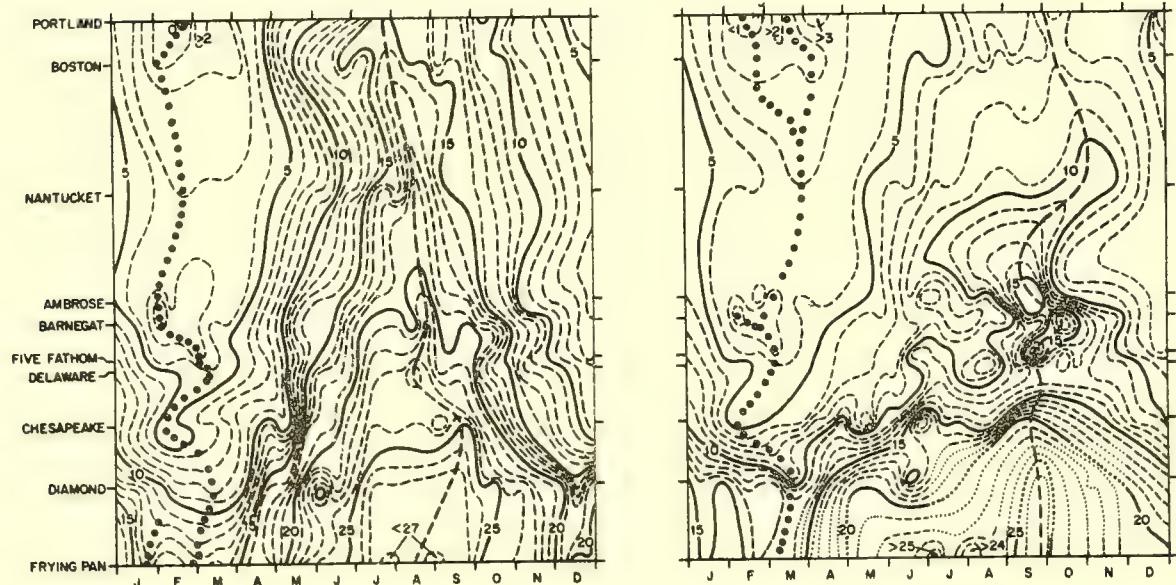


Figure 1.--Temperatures at surface and bottom along the string of observation posts for 1965.

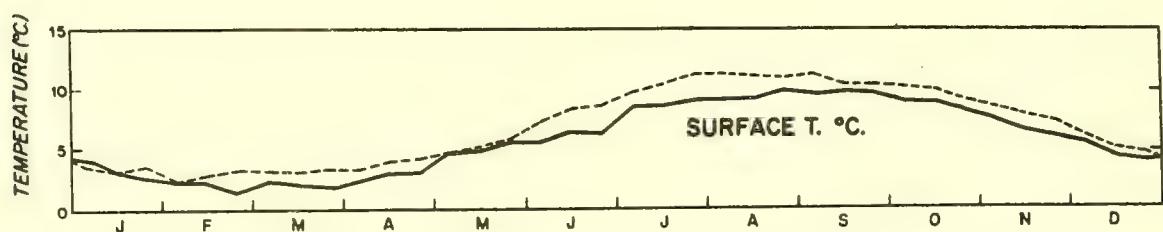


Figure 2.--Mt. Desert Rock Light Station, 1965. (The dashed line is the mean for 1957-64.)

Mount Desert Rock Light Station (fig. 2, table 2)

Surface water temperatures were below normal in all but four decades of the year. New low records were established in 10 decades.

There is a general correspondence between the records of air and water temperatures, although air temperatures were above normal more often than water temperatures.

Table 2.--Mt. Desert Rock Light Station: Surface water temperature
(°C.), 1965. (43°58.1'N., 68°07.7'W.)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
1	-	3.0	2.2	2.2	4.0	5.5	9.2	9.2	8.7	9.8	8.0	5.2
2	-	2.5	2.8	2.2	4.2	5.8	9.4	8.9	8.9	9.2	8.0	5.8
3	-	3.0	2.5	2.0	4.8	5.5	7.5	8.6	9.7	9.2	7.5	6.0
4	-	2.2	2.5	2.2	4.8	5.5	8.3	9.4	9.8	-	8.0	6.0
5	4.0	1.8	3.0	2.2	5.0	5.5	8.9	8.9	9.5	8.9	-	5.8
6	4.0	1.8	2.5	2.2	5.0	5.5	9.3	8.9	9.9	8.2	8.0	6.2
7	4.0	2.2	2.0	2.5	5.0	5.5	9.2	8.6	9.9	8.2	7.0	6.0
8	4.2	3.0	2.5	2.8	5.0	5.5	7.2	9.2	9.7	9.5	6.8	5.2
9	4.2	2.5	2.2	3.0	5.0	5.5	9.0	9.4	10.6	9.0	-	5.2
10	3.6	2.5	2.0	3.0	4.8	6.0	8.3	10.2	10.7	9.0	7.6	5.2
11	3.2	2.5	2.0	3.0	4.5	6.5	7.2	8.9	10.6	9.5	7.0	4.5
12	3.0	2.2	1.8	3.0	5.2	6.5	9.1	9.9	10.0	9.5	6.8	4.5
13	3.2	2.5	2.0	2.5	5.0	6.0	8.4	9.1	10.5	9.2	-	4.5
14	-	2.0	2.0	-	5.2	5.8	7.9	10.0	9.8	8.4	7.5	4.5
15	-	2.2	2.0	2.8	5.2	6.8	8.5	8.8	9.8	8.4	6.2	4.5
16	-	2.5	2.0	3.0	5.2	6.8	10.0	8.3	10.2	8.8	6.8	5.0
17	-	2.0	2.5	3.0	4.8	6.2	9.7	8.9	9.4	9.0	6.8	5.0
18	3.0	2.0	2.5	3.0	4.8	6.5	9.4	9.1	9.0	8.8	6.5	4.5
19	-	3.0	2.5	3.2	5.0	7.0	8.3	10.1	9.8	9.0	6.5	4.2
20	3.2	-	1.8	3.2	4.2	6.5	9.4	9.7	10.3	9.2	6.2	4.0
21	2.5	1.0	1.8	3.2	5.2	6.2	9.2	10.7	10.2	9.0	6.2	4.2
22	2.8	2.0	1.8	3.2	5.5	6.7	10.0	10.5	9.0	8.5	6.5	4.5
23	2.5	-	1.8	3.0	5.2	7.5	9.2	10.0	9.8	8.5	6.5	4.5
24	2.5	1.5	1.5	3.2	5.5	7.0	9.4	10.3	9.7	8.7	7.2	4.5
25	2.5	1.5	2.0	3.2	5.5	6.2	8.9	10.3	9.0	8.5	6.5	4.5
26	2.8	-	2.0	3.0	6.8	6.0	8.9	10.0	11.1	8.5	6.5	-
27	3.0	-	2.0	3.2	5.8	6.0	8.9	10.6	9.2	8.5	5.8	-
28	2.5	1.5	-	3.2	5.8	6.0	9.2	10.0	9.0	8.0	5.5	4.2
29	2.0	-	1.8	3.2	5.5	6.0	9.3	9.8	9.5	8.0	5.8	3.8
30	3.5	-	2.2	3.2	5.8	6.0	9.2	8.3	9.5	8.0	5.5	3.5
31	3.2	-	2.2	-	5.4	-	8.6	9.4	-	8.0	-	4.5
Mean	3.2	2.2	2.1	2.8	5.1	6.1	8.9	9.5	9.8	8.5	6.8	4.8

Portland Lightship (Fig. 3, table 3)

All but 7 decades of the year had below-normal surface water temperatures and 16 had new low values.

Bottom water was colder than normal in 19 of the 24 decades in which it was observed. It was at a record low value in 11 decades, of which 8 were in the first quarter of the year.

The minimum in surface salinity was in early May which is near the average time. Values in the first quarter of the year were mostly near average whereas those in the remainder of the year were largely above normal. Generally the values corresponded well with rainfall and runoff data although the salinity did not reflect the autumnal peak in runoff (U.S. Department of the Interior 1965).

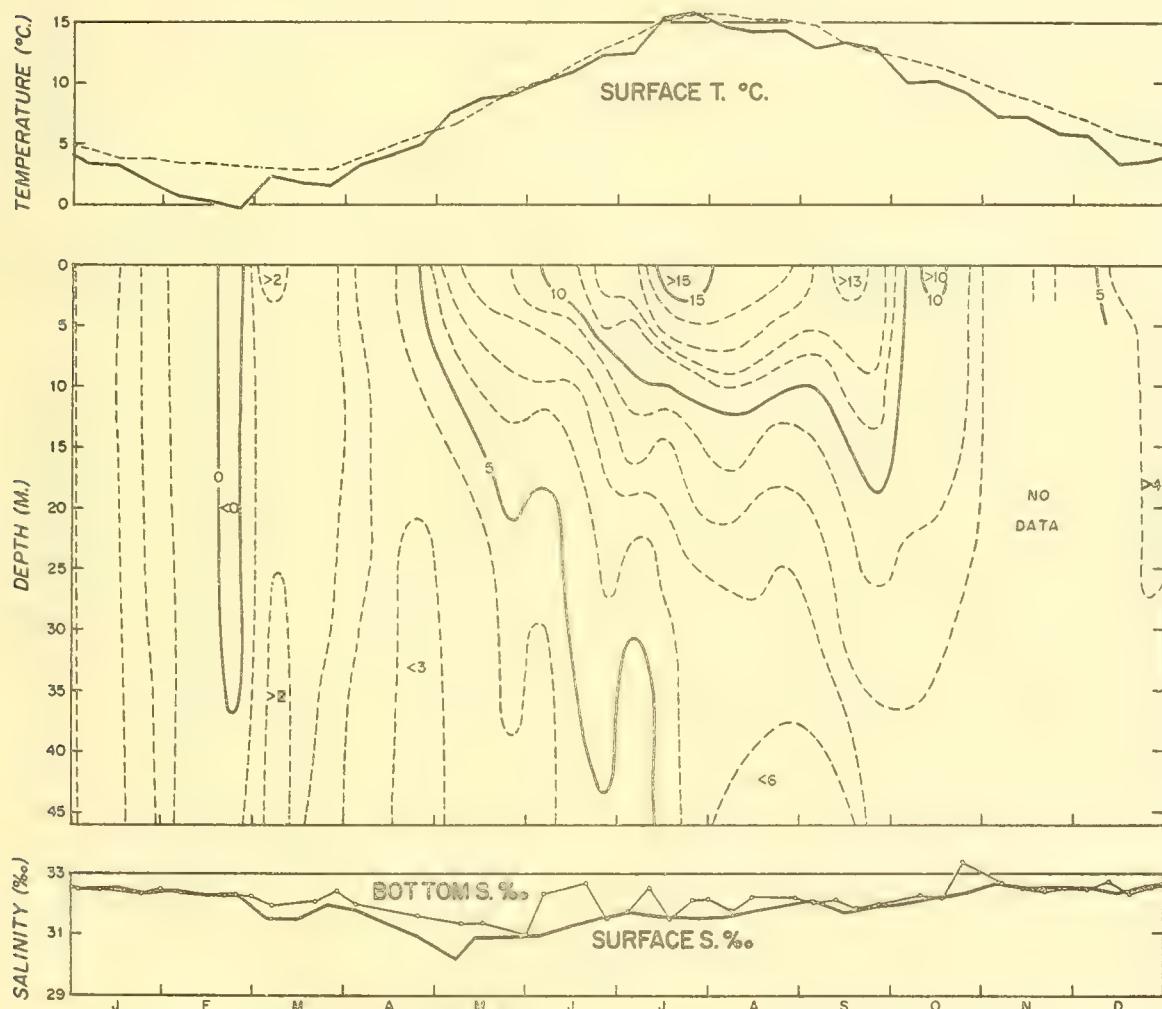


Figure 3.--Portland Lightship, 1965. (The dashed line in the upper diagram is the mean for 1956-64.)

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
1965 ($43^{\circ}31.6' N.$, $70^{\circ}05.5' W.$; water depth: 46 meters)

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
January							
1	3.9	-	-	-	-	32.70	
2	3.1	3.2	3.2	-	-	-	
3	5.0	-	-	-	-	32.54	32.43
4	5.0	-	-	-	-	32.33	
5	2.8	-	-	-	-	32.43	
6	2.9	2.9	2.9	3.1	-	32.47	
7	3.3	-	-	-	-	-	
8	3.0	3.0	3.0	3.1	3.6	32.44	
9	3.1	3.2	3.2	3.5	(3.6)	32.43	
10	3.3	-	-	-	-	-	32.42
11	2.8	2.8	2.8	2.8	3.2	32.30	
12	3.1	3.1	3.1	3.1	-	-	
13	3.3	-	-	-	-	32.55	
14	3.0	3.1	3.3	3.6	-	32.43	
15	2.9	2.9	3.0	3.5	-	33.00	
16	3.9	-	-	-	-	32.67	
17	3.9	-	-	-	-	32.56	
18	2.7	2.7	2.7	(2.7)	-	32.75	
19	2.8	3.1	3.1	3.2	-	32.64	
20	3.1	3.2	3.3	3.7	-	32.33	
21	1.7	-	-	-	-	32.46	
22	3.3	-	-	-	-	32.49	
23	2.0	1.9	1.9	2.2	2.8	32.59	
24	2.2	-	-	-	-	32.27	32.33
25	1.8	1.8	2.0	2.0	-	32.29	
26	2.0	1.9	2.0	2.0	2.0	32.59	
27	1.5	1.6	1.7	-	-	31.07	
28	1.1	1.2	1.3	1.5	(1.5)	32.40	
29	1.1	1.3	1.4	1.7	2.0	32.46	
30	1.5	1.5	1.7	1.9	2.0	32.55	
31	1.5	1.5	1.5	1.6	1.7	32.45	32.42
Mean	2.8	2.4	2.5	2.7	-	32.45	32.40

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$),
1965 ($43^{\circ}31.6' N.$, $70^{\circ}05.5' W.$; water depth: 46 meters)--Continued

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
February							
1	1.0	1.4	1.4	1.5	-	32.43	
2	1.2	1.2	1.2	1.3	(1.3)	32.41	
3	1.0	1.0	1.3	1.5	(1.5)	32.51	
4	0.5	0.7	0.7	1.2	-	32.72	
5	-1.0	-1.0	-1.0	-1.3	(-1.4)	32.53	
6	+0.7	+0.7	+0.7	+0.9	(+0.9)	32.38	
7	2.2	-	-	-	-	32.35	32.37
8	1.1	1.1	1.2	1.5	-	32.36	
9	1.1	1.1	1.1	1.1	1.3	32.36	
10	0.3	0.2	0.7	0.9	0.9	32.23	
11	0.9	0.4	(0.5)	-	-	32.22	
12	0.1	0.2	0.3	0.5	(0.6)	32.11	
13	0.8	0.9	0.9	0.9	(0.8)	32.24	
14	0.0	0.0	0.0	0.2	0.2	32.28	
15	1.1	-	-	-	-	-	
16	-	-	-	-	-	-	
17	0.0	0.0	0.1	0.8	-	32.20	
18	1.1	-	-	-	-	32.28	
19	-1.0	-1.0	-1.0	-1.0	-	32.17	
20	0.0	0.0	0.0	0.2	-	32.34	
21	-0.1	-0.1	-0.1	-0.1	(+0.1)	32.27	32.24
22	-0.1	-0.1	-0.1	-0.1	-	32.19	
23	-	-	-	-	-	32.31	
24	-1.7	-	-	-	-	32.20	
25	-0.1	-0.1	-0.1	-0.1	+0.1	32.58	
26	+1.1	-	-	-	-	32.11	
27	-	-	-	-	-	32.14	
28	-1.1	-	-	-	-	32.37	32.22
29							
30							
31							
Mean	+0.4	+0.3	+0.4	+0.6	(+0.6)	32.32	32.28

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
1965 ($43^{\circ}31.6' N.$, $70^{\circ}05.5' W.$; water depth: 46 meters)--Continued

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
March							
1	2.2	-	-	-	-	31.76	
2	2.2	-	-	-	-	31.92	
3	3.5	1.4	1.4	2.0	2.4	31.36	
4	2.2	-	-	-	-	-	
5	2.8	1.5	1.6	2.0	2.3	30.66	
6	2.0	2.0	2.0	2.0	-	32.26	
7	2.2	-	-	-	-	31.85	31.90
8	2.0	1.9	1.9	2.0	2.0	-	
9	1.5	1.7	1.9	1.9	2.0	31.64	
10	2.2	-	-	-	-	30.36	
11	1.6	1.4	1.1	1.9	-	30.52	
12	1.6	1.5	1.5	1.5	1.7	30.93	
13	1.8	1.8	1.7	1.5	1.9	31.30	
14	1.9	1.8	1.5	1.8	2.1	31.74	
15	1.6	1.5	1.4	1.5	1.9	31.78	
16	2.2	1.5	1.4	1.7	1.9	31.78	
17	1.7	-	-	-	-	31.68	
18	1.7	-	-	-	-	31.45	
19	1.6	1.4	1.4	1.6	1.8	31.54	
20	1.6	1.3	1.3	1.9	-	31.75	
21	1.2	1.2	1.2	1.3	1.8	32.00	32.05
22	1.1	1.0	1.1	1.8	2.5	31.98	
23	1.4	1.4	1.4	2.1	(2.6)	31.95	
24	1.1	0.7	0.9	1.2	2.0	31.83	
25	1.1	1.1	1.2	1.9	-	31.87	
26	1.7	-	-	-	-	31.78	
27	2.2	-	-	-	-	31.89	
28	1.7	-	-	-	-	31.96	32.40
29	1.7	-	-	-	-	31.86	
30	1.7	-	-	-	-	31.96	
31	1.7	-	-	-	-	31.98	
Mean	1.8	1.4	1.4	1.8	2.1	31.63	32.12

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
1965 ($43^{\circ}31.6' N.$, $70^{\circ}05.5' W.$; water depth: 46 meters)--Continued

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
April							
1	3.2	2.7	2.6	3.0	-	31.81	
2	1.7	-	-	-	-	31.79	
3	2.6	2.6	2.5	3.0	-	31.85	
4	3.0	2.5	2.7	3.1	-	31.78	32.18
5	3.3	2.6	3.0	-	-	31.77	
6	3.0	2.8	2.7	3.1	3.5	31.80	
7	3.8	3.1	2.7	3.0	(3.2)	31.56	
8	2.8	-	-	-	-	31.66	
9	3.6	2.8	2.8	2.9	3.3	31.58	
10	3.9	-	-	-	-	31.62	
11	2.2	-	-	-	-	31.68	
12	3.5	3.4	3.2	2.8	(2.8)	31.49	
13	3.8	3.7	3.3	3.2	3.2	31.82	
14	2.2	-	-	-	-	30.79	
15	3.8	3.6	3.4	3.0	3.0	30.60	
16	3.9	-	-	-	-	31.51	
17	4.2	3.8	3.3	3.0	3.0	31.32	
18	5.5	4.0	3.5	3.2	3.0	31.62	
19	4.7	4.0	3.8	3.1	3.0	30.77	
20	4.4	4.0	3.5	3.1	3.0	31.46	
21	4.8	3.8	3.1	2.6	2.4	30.88	
22	4.9	3.7	3.0	2.7	2.5	31.24	
23	4.6	4.5	4.2	-	-	31.21	
24	4.2	3.7	3.5	2.3	2.1	31.41	
25	4.5	3.9	3.6	2.7	2.5	31.46	31.59
26	5.0	4.6	2.7	-	-	30.02	
27	5.0	4.2	4.0	2.8	-	30.42	
28	5.5	4.5	3.3	2.6	2.5	30.79	
29	5.5	3.6	3.1	2.7	2.5	30.63	
30	6.2	4.9	2.7	2.4	-	30.61	
31							
Mean	4.0	3.6	3.2	2.9	2.8	31.30	31.88

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$),
1965 ($43^{\circ}31.6' N.$, $70^{\circ}05.5' W.$; water depth: 46 meters)--Continued

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
May							
1	6.1	-	-	-	-	-	-
2	7.5	5.0	3.9	4.1	3.4	-	-
3	8.1	5.3	3.7	3.6	(3.5)	30.48	
4	8.1	4.7	4.4	-	-	30.07	
5	7.8	5.3	3.9	2.3	2.3	-	
6	8.3	5.3	4.7	3.5	3.5	29.52	
7	7.5	4.9	3.5	-	-	29.56	
8	6.7	-	-	-	-	29.91	
9	7.0	6.1	5.5	3.6	3.3	30.92	31.30
10	7.5	6.1	3.4	3.1	(3.1)	30.74	
11	7.2	6.5	5.3	3.3	3.0	31.18	
12	8.5	7.3	5.4	3.3	3.2	31.18	
13	8.5	8.2	5.2	3.3	3.2	31.04	
14	8.9	7.1	5.7	3.5	3.2	31.37	
15	9.4	-	-	-	-	30.46	
16	9.7	6.3	4.4	3.4	3.3	29.91	31.34
17	8.7	4.8	4.1	3.5	3.5	30.33	
18	8.9	5.2	4.3	-	-	-	
19	8.3	-	-	-	-	-	
20	8.2	6.5	6.0	4.3	3.9	31.47	
21	7.5	6.5	6.1	4.0	3.7	31.40	
22	8.0	6.4	6.1	4.2	-	31.03	
23	8.3	6.5	6.0	4.7	3.2	31.00	
24	8.9	7.5	6.2	4.7	3.2	30.95	
25	8.7	8.0	5.4	4.8	3.5	30.74	
26	10.0	5.8	5.0	4.1	3.8	30.79	
27	9.4	-	-	-	-	30.43	
28	9.3	6.1	5.2	4.4	(3.7)	30.77	
29	8.3	7.1	5.0	(4.1)	-	30.89	
30	10.6	-	-	-	-	30.96	30.93
31	9.5	7.9	5.1	3.9	(3.7)	30.31	
Mean	8.4	6.3	4.9	3.8	3.4	30.67	31.29

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{^{\circ}}/\text{o}$ o),
 1965 ($43^{\circ}31.6'$ N., $70^{\circ}05.5'$ W.; water depth: 46 meters)--Continued

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
June							
1	10.3	6.9	5.0	-	-	30.58	
2	10.6	-	-	-	-	30.59	
3	9.4	8.3	5.6	4.0	3.7	31.26	
4	9.7	8.0	5.4	-	-	-	
5	8.0	6.2	4.7	3.9	3.0	31.11	
6	9.0	7.2	5.6	3.8	(3.5)	31.24	32.30
7	10.0	6.7	5.4	3.7	(3.5)	30.76	
8	11.1	-	-	-	-	31.06	
9	11.8	7.3	5.4	3.9	3.6	30.87	
10	10.0	-	-	-	-	31.17	
11	11.2	7.0	6.2	5.1	5.0	31.01	
12	13.0	8.3	5.8	5.0	4.9	30.61	
13	10.6	-	-	-	-	-	
14	8.2	7.7	5.7	4.3	(4.2)	31.36	
15	9.0	7.1	6.2	5.8	4.2	31.35	
16	10.0	5.6	4.8	4.4	-	31.70	
17	10.6	-	-	-	-	31.24	
18	11.1	-	-	-	-	31.26	
19	11.1	-	-	-	-	-	
20	12.8	7.1	6.8	5.4	4.5	31.28	32.63
21	11.1	-	-	-	-	32.14	
22	12.1	11.5	8.8	6.8	-	31.34	
23	14.4	-	-	-	-	31.40	
24	12.7	7.7	7.3	6.0	-	31.18	
25	12.4	9.1	7.2	6.0	5.4	31.30	
26	13.3	8.7	7.4	6.3	5.7	31.44	
27	13.0	9.1	6.3	5.2	4.6	31.48	31.44
28	11.7	-	-	-	-	31.54	
29	9.4	6.4	5.7	4.6	3.9	31.67	
30	12.0	9.6	7.8	5.7	-	31.61	
31							
Mean	11.0	7.8	6.6	5.0	4.3	31.24	32.12

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$),
1965 ($43^{\circ}31.6' N.$, $70^{\circ}05.5' W.$; water depth: 46 meters)--Continued

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
July							
1	12.3	10.2	8.2	6.1	5.8	31.63	
2	12.2	7.7	6.4	4.6	3.9	31.69	
3	10.4	9.2	8.1	5.6	(5.4)	31.79	
4	11.1	-	-	-	-	31.70	31.69
5	12.3	7.6	7.1	4.6	-	31.70	
6	12.2	11.4	10.5	4.6	(4.0)	31.71	
7	13.9	-	-	-	-	31.68	
8	12.7	11.7	10.5	5.2	(4.2)	31.70	
9	13.7	12.0	8.1	5.0	(4.3)	31.62	
10	13.3	-	-	-	-	31.56	
11	15.5	13.0	10.2	6.2	5.8	31.56	32.48
12	14.4	9.5	7.8	5.9	(5.4)	31.59	
13	15.6	-	-	-	-	31.52	
14	14.5	9.7	8.4	5.8	5.2	31.62	
15	14.5	10.0	7.7	5.9	-	31.61	
16	15.5	9.4	6.9	6.0	5.3	31.69	
17	16.4	8.6	6.1	4.3	3.8	31.58	
18	16.5	10.6	8.0	6.2	5.6	31.40	31.41
19	15.0	-	-	-	-	31.56	
20	16.1	11.9	7.5	5.0	4.7	31.51	
21	16.0	9.1	8.0	6.9	-	31.62	
22	16.0	9.9	7.9	6.4	-	31.63	
23	14.7	9.5	7.3	6.5	-	31.67	
24	15.4	10.6	7.9	6.5	-	31.59	
25	14.6	11.2	9.1	6.6	6.2	31.64	32.09
26	16.7	12.0	9.0	6.9	6.2	31.44	
27	17.0	11.7	9.3	6.9	6.2	31.18	
28	14.5	14.0	10.6	7.1	6.7	31.65	
29	14.7	10.5	8.1	7.3	6.9	31.66	
30	16.3	10.3	8.9	7.1	(6.0)	31.49	
31	17.1	12.1	10.1	7.8	-	31.22	
Mean	14.6	10.5	8.4	6.0	5.3	31.59	31.92

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
1965 ($43^{\circ}31.6' N.$, $70^{\circ}05.5' W.$; water depth: 46 meters)--Continued

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
August							
1	15.6	9.4	7.8	5.1	-	31.46	32.14
2	13.9	11.4	9.4	6.5	(5.5)	31.54	
3	14.9	12.2	9.1	6.9	(5.2)	31.40	
4	14.6	14.2	9.5	6.8	(6.6)	31.52	
5	14.7	12.1	9.5	6.3	(5.9)	31.42	
6	14.6	12.3	8.8	5.9	(5.7)	31.55	
7	14.4	-	-	-	-	31.68	
8	14.3	11.5	9.1	6.9	5.3	31.60	31.69
9	15.0	-	-	-	-	-	
10	13.8	13.3	11.1	6.7	(5.5)	31.67	
11	13.3	9.1	7.5	5.7	4.8	31.64	
12	14.5	10.9	8.6	6.5	5.9	31.67	
13	14.1	9.8	8.6	6.4	(6.1)	31.71	
14	16.3	14.1	10.5	7.3	6.5	31.71	
15	14.7	10.5	8.3	-	-	31.69	32.19
16	13.3	11.0	9.3	6.9	(5.1)	31.78	
17	14.2	13.3	10.0	7.5	(6.5)	31.84	
18	14.0	10.4	8.1	6.2	-	31.81	
19	13.2	12.8	8.7	7.2	(6.4)	31.89	
20	14.3	12.3	10.7	6.7	(6.2)	31.84	
21	13.8	9.9	8.4	7.5	-	31.86	
22	15.0	-	-	-	-	31.83	
23	14.2	10.1	8.1	6.1	5.7	31.82	
24	13.9	10.6	8.2	5.7	5.4	31.53	
25	15.6	-	-	-	-	31.68	
26	15.0	9.7	8.3	7.0	-	31.52	
27	15.6	11.5	9.9	7.5	-	31.51	
28	15.6	-	-	-	-	31.84	
29	15.0	10.7	7.8	7.0	-	31.82	32.19
30	11.7	11.3	7.6	6.1	-	31.84	
31	12.2	-	-	-	-	31.95	
Mean	14.4	11.4	8.9	6.6	(5.8)	31.69	32.05

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$),
1965 ($43^{\circ}31.6' N.$, $70^{\circ}05.5' W.$; water depth: 46 meters)--Continued

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
September							
1	11.7	-	-	-	-	32.95	
2	11.1	-	-	-	-	31.90	
3	12.8	-	-	-	-	32.00	
4	13.3	-	-	-	-	-	
5	13.9	-	-	-	-	32.05	32.00
6	13.3	-	-	-	-	32.00	
7	12.8	-	-	-	-	31.97	
8	13.3	-	-	-	-	31.99	
9	13.9	-	-	-	-	31.93	
10	12.8	-	-	-	-	31.89	
11	13.3	-	-	-	-	31.48	
12	13.9	-	-	-	-	32.03	32.08
13	13.9	-	-	-	-	31.48	
14	13.3	-	-	-	-	31.73	
15	13.3	-	-	-	-	31.57	
16	13.3	-	-	-	-	31.67	
17	12.7	11.9	10.1	8.1	-	31.56	
18	13.4	11.1	10.6	8.0	6.0	31.64	
19	12.8	12.2	10.7	-	-	31.82	31.80
20	12.8	12.0	9.4	8.2	-	31.81	
21	13.5	12.7	11.1	8.8	-	31.66	
22	14.0	12.5	10.0	(8.3)	-	31.75	
23	13.2	11.7	9.5	7.8	-	31.80	
24	13.9	-	-	-	-	31.77	
25	12.7	11.8	9.7	-	-	31.83	
26	13.5	12.2	10.9	8.1	7.1	31.89	31.91
27	12.0	12.0	12.0	10.0	(7.3)	32.10	
28	12.1	11.8	11.5	8.8	-	31.97	
29	11.4	11.0	10.2	8.0	-	32.00	
30	11.2	11.0	10.9	10.1	8.5	31.84	
31							
Mean	13.0	-	-	-	-	31.86	31.95

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
1965 ($43^{\circ}31.6' N.$, $70^{\circ}05.5' W.$; water depth: 46 meters)--Continued

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
October							
1	11.7	11.7	11.4	9.8	-	31.04	
2	10.6	10.6	9.8	(8.2)	-	32.01	
3	10.0	9.9	9.9	7.7	-	32.07	
4	-	-	-	-	-	-	
5	10.1	10.1	10.1	8.5	-	32.33	
6	9.0	8.8	8.6	7.4	-	32.35	
7	9.6	9.4	9.2	7.9	-	32.40	
8	10.0	10.0	9.9	9.7	-	-	
9	10.0	9.8	9.6	8.1	(7.2)	32.20	
10	8.6	8.3	7.6	6.8	5.0	31.18	32.21
11	9.1	8.4	7.8	7.2	5.8	32.18	
12	-	10.7	10.2	8.9	(8.0)	31.82	
13	10.7	10.4	9.7	8.6	7.4	32.13	
14	10.5	10.3	10.2	(8.7)	-	32.20	
15	9.0	8.8	8.1	6.9	-	32.15	
16	9.1	9.0	9.0	8.7	-	32.21	
17	9.8	9.1	8.9	7.9	-	32.23	32.18
18	9.6	9.2	9.1	7.4	6.5	32.15	
19	11.5	11.2	11.1	9.5	8.1	32.28	
20	11.5	10.7	10.3	9.7	-	32.31	
21	10.0	8.9	8.5	6.6	5.6	32.12	
22	9.4	-	-	-	-	32.04	
23	10.5	10.3	10.3	-	-	32.25	
24	11.0	10.3	9.7	8.3	7.9	32.11	33.38
25	9.6	9.7	9.7	8.3	7.4	33.57	
26	8.8	8.7	8.6	-	-	32.31	
27	8.5	8.8	8.6	7.4	6.5	32.30	
28	8.3	8.3	8.3	7.4	-	32.32	
29	8.2	8.1	8.1	8.1	-	32.44	
30	8.3	-	-	-	-	32.36	
31	7.5	7.5	7.4	6.9	-	32.32	32.32
Mean	9.7	9.5	9.3	8.1	(6.9)	32.19	32.52

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
 1965 ($43^{\circ}31.6' N.$, $70^{\circ}05.5' W.$; water depth: 46 meters)--Continued

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
November							
1	7.2	-	-	-	-	-	
2	7.2	-	-	-	-	32.59	
3	5.6	-	-	-	-	32.65	
4	5.6	-	-	-	-	32.62	
5	9.4	-	-	-	-	32.70	
6	7.2	-	-	-	-	32.72	
7	7.2	-	-	-	-	32.60	32.62
8	7.8	-	-	-	-	32.54	
9	7.8	-	-	-	-	32.61	
10	6.9	-	-	-	-	32.67	
11	6.7	-	-	-	-	32.42	
12	6.7	-	-	-	-	32.52	
13	7.8	-	-	-	-	32.28	
14	7.8	-	-	-	-	-	32.48
15	6.7	-	-	-	-	32.50	
16	7.2	-	-	-	-	32.41	
17	10.0	-	-	-	-	-	
18	6.7	-	-	-	-	32.58	
19	5.6	-	-	-	-	32.32	
20	5.6	-	-	-	-	32.57	
21	6.1	-	-	-	-	32.45	32.38
22	6.1	-	-	-	-	32.33	
23	5.6	-	-	-	-	32.46	
24	6.7	-	-	-	-	32.64	
25	6.1	-	-	-	-	32.53	
26	5.6	-	-	-	-	-	
27	-	-	-	-	-	-	
28	5.6	-	-	-	-	32.42	32.42
29	5.6	-	-	-	-	32.43	
30	5.6	-	-	-	-	32.44	
31							
Mean	6.7	-	-	-	-	32.52	32.48

Table 3.--Portland Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
1965 ($43^{\circ}31.6' N.$, $70^{\circ}05.5' W.$; water depth: 46 meters)--Continued

Month and day	Temperature at depth of--					Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	0 m.	46 m.
December							
1	5.6	-	-	-	-	32.25	
2	6.7	-	-	-	-	32.61	
3	6.1	-	-	-	-	32.37	
4	6.1	-	-	-	-	32.41	
5	6.1	-	-	-	-	32.53	(32.43)
6	5.0	-	-	-	-	32.38	
7	5.0	-	-	-	-	32.53	
8	5.0	-	-	-	-	32.53	
9	5.0	-	-	-	-	32.55	
10	5.0	-	-	-	-	32.62	
11	-	-	-	-	-	32.62	
12	4.4	-	-	-	-	32.75	(32.66)
13	2.2	-	-	-	-	31.48	
14	3.3	-	-	-	-	32.39	
15	1.1	-	-	-	-	32.38	
16	2.2	-	-	-	-	32.53	
17	4.4	5.7	6.1	6.2	-	31.91	
18	5.0	5.1	-	-	-	32.42	
19	4.5	4.6	5.0	5.9	(6.0)	32.11	32.25
20	1.7	1.9	2.0	2.1	-	32.25	
21	1.3	1.2	1.2	-	-	32.44	
22	5.0	5.0	5.1	5.8	-	32.33	
23	4.8	4.9	5.0	5.2	-	32.57	
24	4.5	4.6	4.6	5.1	-	32.41	
25	4.8	4.9	4.9	5.3	-	32.35	
26	1.9	1.9	1.9	1.9	2.2	32.53	(32.44)
27	1.7	-	-	-	-	32.81	
28	0.8	0.9	1.0	1.6	-	33.34	
29	4.5	4.7	4.7	5.0	-	32.37	
30	4.4	-	-	-	-	32.44	
31	4.4	-	-	-	-	32.56	
Mean	4.1	-	-	-	-	32.44	(32.44)

Boston Lightship (fig. 4, table 4)

The cold year is apparent in the temperatures of air and surface water at this observation post also. The surface water temperatures clearly reflect the monthly air temperature which was above normal only in May and December and was near normal for June. New record lows were established in 16 of the 33 decades in which surface water temperature was reported.

Bottom water temperatures were record lows in all decades reported except for late April through mid-June. In that period the surface water temperature was above normal and the thermocline was forming.

The surface salinity minimum came in early June, 2 decades later than normal. Salinities were above normal from mid-April through the end of the year but did not exceed the records established in the drought year of 1957.

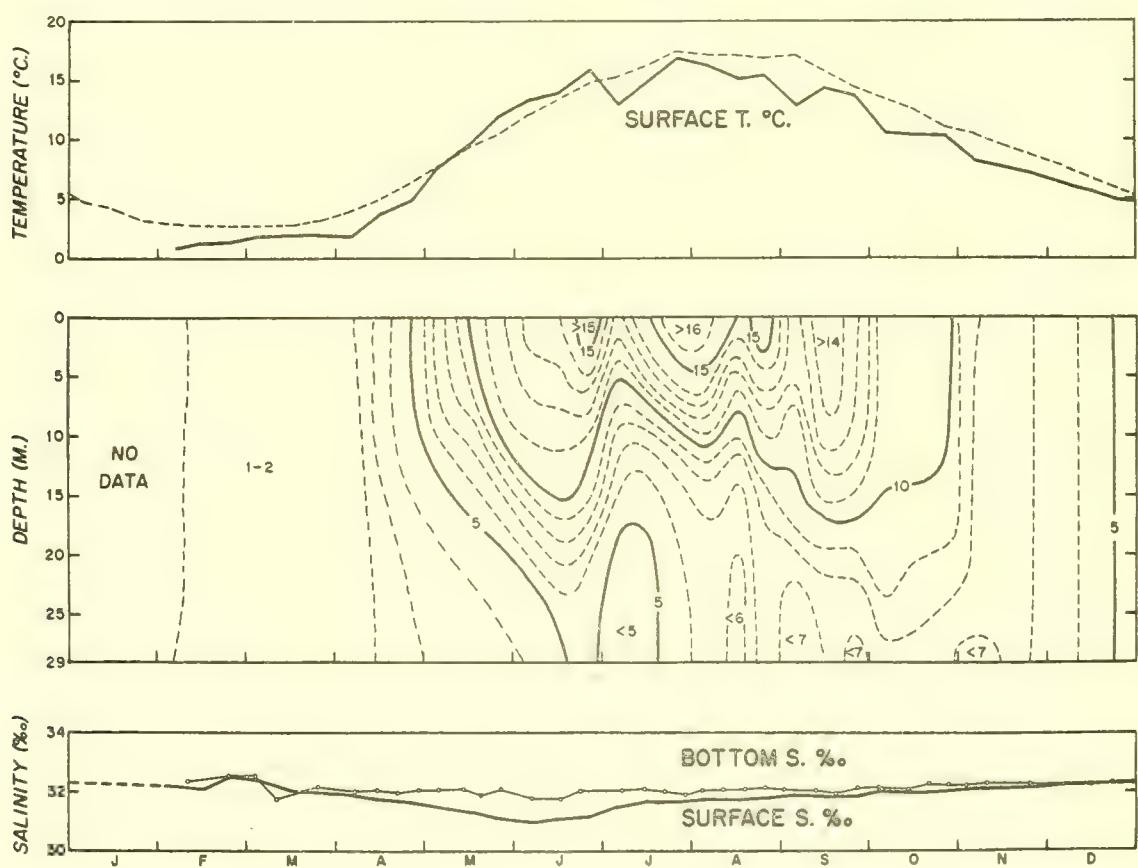


Figure 4.--Boston Lightship, 1965. (The dashed line in the upper diagram is the mean for 1956-64.)

Table 4.--Boston Lightship: temperature ($^{\circ}$ C.) and salinity (σ/oo), 1965 ($42^{\circ}20.4' N.$, $70^{\circ}45.5' W.$; water depth: 29 meters)

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
January						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
Mean						

Table 4.--Boston Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($42^{\circ}20.4' N.$, $70^{\circ}45.5' W.$;
water depth: 29 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
February						
1	-	-	-	-	-	-
2	-	-	-	-	32.45	
3	1.7	1.7	1.7	1.8	30.82	
4	0.6	0.6	0.7	0.9	-	
5	0.4	0.7	0.7	0.8	-	
6	0.7	0.8	0.8	0.9	32.48	
7	0.9	0.9	0.9	1.0	32.45	
8	-	-	-	-	32.38	
9	0.3	0.3	0.5	0.5	30.32	
10	0.9	0.9	0.9	0.9	32.37	32.36
11	0.6	0.6	0.7	1.2	32.20	
12	0.7	0.7	0.8	1.0	32.36	
13	1.0	1.1	1.3	1.5	32.36	
14	1.6	1.7	1.7	1.9	31.44	
15	1.7	1.8	1.8	1.9	30.98	
16	1.4	1.5	1.6	1.9	-	
17	1.5	1.8	1.8	1.9	31.74	
18	1.1	1.2	1.5	1.7	32.43	
19	1.5	1.7	1.7	1.9	32.32	
20	1.4	1.5	1.5	1.6	32.44	
21	1.4	1.4	1.5	1.7	32.46	
22	1.4	1.5	1.5	1.5	32.47	
23	1.3	1.3	1.4	1.5	32.44	
24	1.2	1.2	1.2	1.2	32.49	32.48
25	-	-	-	-	-	
26	1.1	1.1	1.1	1.2	32.44	
27	1.5	1.5	1.6	1.7	32.50	
28	1.4	1.5	1.5	1.5	32.51	
29						
30						
31						
Mean	1.1	1.2	1.3	1.4	32.21	32.42

Table 4.--Boston Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($42^{\circ}20.4'N.$, $70^{\circ}45.5'W.$; water depth: 29 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
March						
1	1.3	1.3	1.3	1.3	32.72	
2	1.5	1.5	1.5	1.5	32.48	
3	1.8	1.7	1.6	1.5	32.47	32.48
4	1.8	1.7	1.4	1.4	32.47	
5	2.2	2.0	1.8	1.8	32.47	
6	1.6	1.7	1.7	1.7	32.44	
7	1.5	1.5	1.5	1.4	32.09	
8	1.6	1.4	1.5	1.5	31.97	
9	1.8	1.8	1.6	1.6	32.20	
10	2.0	1.6	1.7	1.8	-	31.73
11	1.6	1.7	1.7	1.8	32.27	
12	1.6	1.8	1.8	(1.9)	31.91	
13	1.9	1.9	1.9	1.9	32.10	
14	1.7	1.7	1.8	1.9	32.06	
15	2.0	1.9	1.9	1.9	32.30	
16	1.9	1.9	1.9	2.0	32.00	
17	2.0	1.9	1.9	2.0	31.88	
18	2.1	2.0	2.0	2.0	31.74	
19	2.0	2.0	1.9	1.9	31.74	
20	1.8	1.9	2.0	2.0	31.98	
21	1.7	-	-	-	-	
22	1.7	-	-	-	-	
23	1.8	1.8	1.8	-	31.91	
24	1.7	1.7	1.7	1.9	31.95	32.18
25	2.0	1.9	1.9	1.9	31.99	
26	2.0	2.0	2.0	-	31.94	
27	1.6	1.6	1.6	(1.5)	32.01	
28	2.1	2.0	2.0	2.0	31.90	
29	-	-	-	-	-	
30	2.0	2.0	2.0	2.0	31.90	
31	1.9	1.9	1.9	2.0	31.88	31.87
Mean	1.8	1.8	1.8	1.8	32.10	32.06

Table 4---Boston Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($42^{\circ}20.4' N.$, $70^{\circ}45.5' W.$; water depth: 29 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
April						
1	1.4	1.4	1.4	1.4	31.98	
2	1.3	1.3	1.3	1.3	31.94	
3	1.5	1.5	1.4	1.4	31.96	
4	1.7	1.6	1.6	1.6	32.01	
5	1.0	0.8	0.7	0.5	32.01	
6	1.5	1.3	1.2	0.7	31.93	
7	1.6	1.4	1.2	0.8	31.94	32.00
8	1.5	1.5	0.8	(0.8)	31.71	
9	2.5	1.9	1.5	1.3	31.67	
10	3.2	2.1	1.9	1.9	31.75	
11	3.5	3.1	2.5	2.0	31.82	
12	3.4	3.4	2.5	2.0	31.71	
13	3.5	3.4	2.9	2.1	31.57	
14	2.9	2.9	2.6	2.0	31.88	32.05
15	3.7	3.0	2.9	2.0	31.76	
16	3.5	2.6	2.2	1.9	31.52	
17	3.9	3.8	3.0	2.1	31.75	
18	4.0	3.6	3.2	2.0	31.87	
19	3.9	3.4	3.2	2.0	31.68	
20	3.9	-	-	-	31.59	
21	4.4	-	-	-	31.58	31.98
22	4.4	-	-	-	31.61	
23	4.4	-	-	-	31.64	
24	4.4	-	-	-	31.78	
25	3.9	-	-	-	31.79	
26	3.9	-	-	-	31.72	
27	-	-	-	-	-	
28	5.4	4.6	4.1	2.7	31.57	32.04
29	5.7	5.2	4.3	3.0	31.68	
30	6.0	5.4	4.3	2.9	31.58	
31						
Mean	3.3	(2.7)	2.3	1.7	31.76	32.02

Table 4.--Boston Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($42^{\circ}20.4' N.$, $70^{\circ}45.5' W.$;
water depth: 29 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
May						
1	7.3	5.9	4.6	3.5	31.36	
2	7.0	5.8	5.0	3.5	31.44	
3	7.2	7.0	6.4	4.1	31.53	
4	7.2	6.1	4.9	-	31.42	
5	7.8	7.0	4.9	(3.0)	31.41	32.03
6	7.8	6.9	4.1	(2.8)	31.47	
7	7.8	6.8	3.8	2.9	31.44	
8	7.6	7.4	3.6	(3.1)	31.49	
9	-	-	-	-	-	
10	9.5	6.5	3.9	3.2	31.61	
11	9.3	6.8	3.7	3.2	31.46	
12	9.3	7.2	4.3	2.7	31.47	
13	9.0	4.9	2.9	2.7	31.47	32.12
14	-	-	-	-	-	
15	-	-	-	-	-	
16	-	-	-	-	-	
17	10.4	8.2	5.6	3.1	31.52	
18	10.2	10.2	8.3	4.0	31.47	
19	10.5	8.8	7.3	4.2	30.85	31.87
20	10.2	8.7	7.2	4.2	30.84	
21	10.3	9.3	5.3	2.9	31.01	
22	11.4	11.2	8.0	4.6	30.95	
23	11.5	11.1	7.4	3.9	31.10	
24	11.3	10.9	8.0	4.0	31.40	
25	11.5	10.8	8.9	3.1	31.20	
26	11.8	11.1	7.4	3.3	30.92	32.03
27	12.3	11.1	5.6	3.5	30.92	
28	12.0	10.3	6.2	-	30.91	
29	12.2	-	-	-	31.08	
30	12.9	9.9	4.5	3.0	31.16	
31	12.8	9.8	6.5	3.9	-	
Mean	9.9	8.4	5.7	3.4	31.27	32.01

Table 4.--Boston Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($42^{\circ}20.4' N.$, $70^{\circ}45.5' W.$;
water depth: 29 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
June						
1	12.8	11.1	4.9	3.1	31.14	
2	12.3	7.4	5.1	(2.9)	31.17	-
3	11.3	11.5	9.3	3.7	31.18	
4	12.5	11.9	9.7	4.0	30.95	
5	13.0	12.8	11.1	(5.0)	30.70	
6	12.5	10.9	9.1	(3.5)	31.08	
7	13.9	12.9	8.8	5.0	30.95	
8	14.2	13.3	10.8	(5.0)	30.98	
9	14.1	13.1	10.5	4.8	30.88	31.80
10	14.1	11.2	7.6	3.6	30.88	
11	15.4	14.9	9.3	5.0	30.86	
12	14.5	11.4	7.6	3.9	30.86	
13	14.5	11.6	6.4	(4.9)	30.86	
14	10.6	10.3	10.2	4.1	31.54	
15	10.4	10.1	10.1	3.8	31.16	
16	11.8	9.8	9.6	4.5	31.15	31.79
17	11.5	11.0	10.3	4.8	31.14	
18	14.8	11.4	9.8	(7.1)	31.13	
19	16.0	13.2	16.6		31.07	
20	16.0	12.7	12.0	-	31.02	
21	16.8	13.3	11.4	(5.8)	30.99	
22	16.2	15.0	11.6	(5.5)	31.11	
23	17.0	13.9	9.9	(5.6)	31.18	32.00
24	17.0	12.2	8.9	5.4	31.08	
25	16.9	11.0	14.6	6.0	31.24	
26	15.5	11.1	8.4	4.9	31.16	
27	15.0	10.5	6.8	4.6	31.15	
28	13.8	9.7	7.5	4.5	31.23	
29	14.1	11.3	6.9	4.5	31.26	
30	14.3	10.4	6.3	4.5	31.30	
31						
Mean	14.1	11.7	9.4	4.6	31.08	31.86

Table 4.--Boston Lightship; temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($42^{\circ}20.4' N.$, $70^{\circ}45.5' W.$;
water depth: 29 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
July						
1	14.5	10.8	7.3	(4.0)	31.24	
2	13.9	-	-	-	31.36	
3	11.7	10.8	6.6	4.7	31.48	
4	11.7	10.8	8.8	(4.5)	31.54	
5	12.7	9.0	5.3	(4.8)	31.54	
6	12.5	6.5	4.7	4.6	31.55	
7	12.8	7.1	5.1	4.7	31.62	32.04
8	12.8	6.6	4.4	4.2	31.62	
9	13.2	7.1	4.8	4.5	31.63	
10	13.4	6.0	5.1	4.8	31.73	
11	13.9	9.0	5.9	4.9	31.64	
12	13.2	7.6	4.9	3.6	31.66	
13	13.5	8.5	5.1	(4.0)	31.72	
14	14.2	7.1	5.0	4.7	31.73	32.08
15	15.2	11.4	6.0	5.0	31.70	
16	17.2	10.5	5.8	5.2	31.66	
17	15.0	7.7	5.2	3.8	31.68	
18	15.6	8.6	5.4	(5.3)	31.60	
19	14.8	8.2	4.7	-	31.63	
20	15.6	9.8	6.8	5.5	31.54	
21	16.5	9.6	5.9	-	31.56	32.00
22	16.1	10.4	6.3	(5.4)	31.58	
23	15.8	9.9	6.0	(5.7)	31.72	
24	16.8	10.6	6.2	5.8	31.68	
25	17.2	10.7	5.9	5.8	31.58	
26	17.6	12.0	6.2	5.9	31.58	
27	17.1	12.7	7.3	5.5	31.61	
28	16.5	8.3	6.2	5.5	31.75	31.96
29	16.5	8.8	6.5	5.8	31.79	
30	17.2	8.9	6.3	6.1	31.76	
31	17.0	10.0	7.1	6.2	31.76	
Mean	14.9	9.2	5.9	5.0	31.62	32.02

Table 4.--Boston Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($42^{\circ}20.4' N.$, $70^{\circ}45.5' W.$; water depth: 29 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
August						
1	16.4	10.2	7.9	7.7	31.76	
2	15.0	9.0	6.2	6.0	31.76	
3	15.0	14.8	9.4	6.0	31.76	
4	17.1	13.9	9.0	7.5	31.77	32.01
5	16.4	13.7	7.2	5.6	31.76	
6	16.2	10.8	7.0	5.4	31.74	
7	17.2	13.5	6.6	5.5	31.89	
8	16.5	12.7	7.0	6.7	31.76	
9	16.1	9.6	6.5	5.7	31.77	
10	15.2	10.0	6.7	5.5	31.76	
11	15.9	9.4	7.7	5.5	31.74	32.05
12	15.0	9.2	7.2	5.3	31.78	
13	13.3	9.0	5.1	(3.2)	31.79	
14	15.7	12.0	7.0	5.4	31.79	
15	15.3	10.1	7.0	5.5	31.78	
16	15.7	11.9	8.5	7.4	31.75	
17	16.6	10.9	8.0	7.2	31.77	
18	12.3	6.7	4.5	3.9	31.81	32.10
19	14.5	7.5	6.3	6.1	31.79	
20	15.4	8.5	7.9	7.2	31.56	
21	16.1	10.9	7.3	7.1	31.69	
22	15.9	10.1	8.1	7.3	31.71	
23	15.9	10.4	7.8	7.4	31.77	
24	16.0	11.8	8.5	7.5	31.78	
25	16.2	10.3	7.7	7.4	31.85	32.17
26	15.9	11.9	9.3	7.6	31.86	
27	15.9	12.1	8.9	7.9	31.78	
28	14.7	8.1	5.2	4.7	31.79	
29	15.0	14.7	7.9	7.9	31.81	
30	13.9	13.7	12.9	7.9	31.86	
31	13.1	12.2	10.9	(7.1)	31.90	
Mean	15.5	11.0	7.7	6.4	31.78	32.08

Table 4.--Boston Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($42^{\circ}20.4' N.$, $70^{\circ}45.5' W.$; water depth: 29 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
September						
1	11.5	10.8	9.9	6.5	31.90	32.09
2	11.5	11.2	14.0	6.5	31.90	
3	12.3	11.3	8.4	6.8	31.87	
4	12.0	10.4	9.3	6.1	31.90	
5	12.8	10.7	10.0	6.0	31.87	
6	12.2	10.2	9.3	4.6	31.91	
7	13.3	10.2	8.5	6.2	31.93	
8	-	-	-	-	-	
9	14.1	11.4	8.6	5.6	31.93	
10	14.4	7.9	9.2	5.5	31.86	
11	15.8	14.9	9.8	6.7	31.91	
12	14.9	14.1	10.4	6.3	31.93	32.08
13	14.9	12.5	9.7	7.2	31.92	
14	13.2	12.9	10.9	7.2	31.82	
15	13.9	-	-	-	31.81	
16	13.0	12.3	12.0	6.6	31.86	
17	14.0	13.8	13.4	7.7	31.81	
18	14.0	13.8	11.7	6.7	31.85	
19	14.7	14.3	13.1	7.6	31.80	31.87
20	14.8	13.8	10.4	7.3	31.83	
21	15.5	13.7	11.3	7.2	31.76	
22	15.6	14.1	11.1	6.9	31.74	
23	15.9	13.4	10.3	(6.8)	31.75	
24	15.4	12.5	10.5	6.8	31.77	
25	15.0	13.4	11.6	6.5	31.59	
26	13.8	13.5	11.3	6.3	32.00	32.17
27	12.2	12.1	11.5	5.5	31.83	
28	12.0	12.0	10.8	6.5	31.86	
29	10.4	10.1	8.7	5.9	31.86	
30	11.0	11.0	10.9	8.1	31.91	
31						
Mean	13.6	12.2	10.6	6.6	31.85	32.05

Table 4.--Boston Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($42^{\circ}20.4' N.$, $70^{\circ}45.5' W.$; water depth: 29 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
October						
1	11.3	11.1	9.7	7.7	31.95	
2	11.4	11.3	11.1	7.4	31.96	
3	11.6	11.5	10.9	6.8	31.98	32.18
4	11.0	11.0	11.0	8.4	32.06	
5	9.9	9.9	9.9	6.9	32.09	
6	9.5	9.5	9.5	8.5	32.07	
7	9.8	9.4	9.0	7.9	32.08	
8	9.6	9.4	9.3	8.1	32.05	
9	10.6	9.4	8.8	8.1	32.10	
10	10.5	10.3	9.3	8.1	32.05	
11	10.6	10.3	10.1	8.0	32.06	
12	10.1	9.7	9.1	8.0	31.89	
13	10.1	10.0	9.9	6.8	31.94	32.04
14	10.3	10.2	10.0	7.9	31.89	
15	10.5	10.4	9.8	-	31.93	
16	10.2	10.1	10.0	-	31.90	
17	10.3	10.3	10.2	7.0	32.06	
18	10.1	10.2	10.2	(7.0)	31.98	
19	10.7	10.4	10.1	7.0	32.01	
20	11.0	10.6	9.9	7.0	32.01	32.27
21	11.2	10.6	10.0	7.0	32.06	
22	11.0	10.9	9.2	6.7	32.00	
23	10.6	10.5	10.1	7.3	32.00	
24	10.8	10.8	10.6	7.9	32.00	
25	10.6	10.6	10.5	7.9	32.02	
26	10.2	10.1	10.1	6.8	32.02	
27	10.6	10.4	10.3	6.8	32.02	32.22
28	9.8	9.8	9.8	6.7	32.02	
29	9.6	9.6	9.6	7.5	32.08	
30	9.4	9.3	9.3	7.3	32.07	
31	9.2	9.2	9.1	6.7	32.10	
Mean	10.4	10.2	9.9	7.4	32.01	32.18

Table 4.--Boston Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($42^{\circ}20.4' N.$, $70^{\circ}45.5' W.$; water depth: 29 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
November						
1	8.4	8.3	8.3	6.0	32.12	
2	7.1	7.1	7.1	7.1	32.19	
3	7.3	7.2	7.2	6.0	32.14	32.21
4	8.2	8.1	8.0	6.0	32.13	
5	8.3	8.1	8.1	6.7	32.16	
6	8.3	8.1	8.1	6.1	32.16	
7	8.5	8.4	8.4	6.2	32.12	
8	8.3	8.3	8.3	7.4	32.16	
9	8.3	8.2	8.2	5.9	32.17	
10	7.9	8.0	8.0	7.7	32.17	32.27
11	8.0	8.0	8.0	6.9	32.18	
12	7.8	7.8	7.8	7.1	32.23	
13	7.7	7.7	7.7	7.4	32.14	
14	7.7	7.7	7.7	7.0	32.14	
15	7.3	7.3	7.3	7.2	32.18	
16	7.8	7.7	7.7	7.1	32.17	
17	7.8	7.6	7.6	6.8	32.13	
18	7.0	7.0	7.0	6.7	32.20	
19	7.4	7.3	7.3	7.0	32.22	
20	7.2	7.1	7.1	6.8	32.22	
21	7.3	7.3	7.3	7.3	32.19	
22	7.0	6.8	6.8	6.1	32.19	
23	7.6	7.6	7.6	7.3	32.22	
24	7.6	7.7	7.7	7.6	32.23	32.26
25	7.0	7.0	7.0	7.0	32.23	
26	7.3	7.3	7.3	6.9	32.21	
27	7.0	7.0	7.0	7.1	32.16	
28	7.2	7.0	7.0	6.9	32.18	
29	6.5	6.5	6.5	6.2	32.20	
30	6.3	6.3	6.3	6.2	32.20	
31						
Mean	7.6	7.5	7.5	6.8	32.18	32.25

Table 4.--Boston Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($42^{\circ}20.4' N.$, $70^{\circ}45.5' W.$; water depth: 29 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	29 m.	0 m.	29 m.
December						
1	6.1	6.1	6.1	6.1	32.17	
2	6.0	6.0	6.1	6.4	-	
3	-	-	-	-	-	
4	-	-	-	-	-	
5	6.1	6.2	6.1	6.3	32.50	
6	6.5	6.6	6.6	6.7	32.28	
7	6.4	6.4	6.4	6.4	32.31	
8	6.3	6.3	6.3	6.3	32.37	
9	6.1	6.1	6.1	6.1	32.30	
10	6.2	6.1	6.1	6.1	32.32	
11	6.3	6.3	6.3	6.3	32.30	
12	6.0	6.0	6.0	6.0	32.34	
13	-	-	-	-	-	
14	5.8	5.8	5.8	5.9	32.26	
15	5.4	5.4	5.4	5.5	32.23	32.26
16	5.3	5.4	5.5	5.6	32.23	
17	5.6	5.7	5.7	5.8	32.27	
18	5.8	5.8	5.8	5.8	32.30	
19	5.6	5.6	5.6	5.6	32.32	
20	5.0	5.0	5.0	5.0	32.24	
21	5.0	4.9	4.9	4.9	32.25	
22	5.0	-	-	-	32.34	32.36
23	5.2	5.2	5.2	5.2	32.37	
24	5.2	5.2	5.1	5.1	32.36	
25	5.0	5.0	5.0	5.0	32.31	
26	-	-	-	-	-	
27	4.8	4.7	4.7	4.8	32.34	
28	4.5	4.6	4.7	4.8	32.34	
29	4.5	4.5	4.5	4.6	-	32.37
30	4.7	4.7	4.7	(4.7)	32.50	
31	4.4	4.4	4.4	(4.4)	32.34	
Mean	5.5	5.5	5.5	5.6	32.32	32.33

Nantucket Shoals Lightship (fig. 5, table 5)

At Nantucket Shoals surface temperature was subnormal most of the year. The difference in temperature trend between this observation post and those mentioned above are associated with local differences in air temperature. Water temperature record highs were reached in mid-July and mid-August. There were new record lows in 11 decades, 8 of which were in spring.

Although bottom temperatures from earlier years are scarce, the data for 1965 indicate a cold year.

Surface salinity was near normal for most decades of the year. The observed extremes were 32.18 ‰ in mid-July and 32.83 ‰ in early November. In the averages for previous years the range is from 32.28 ‰ in late August to 32.93 ‰ in late March.

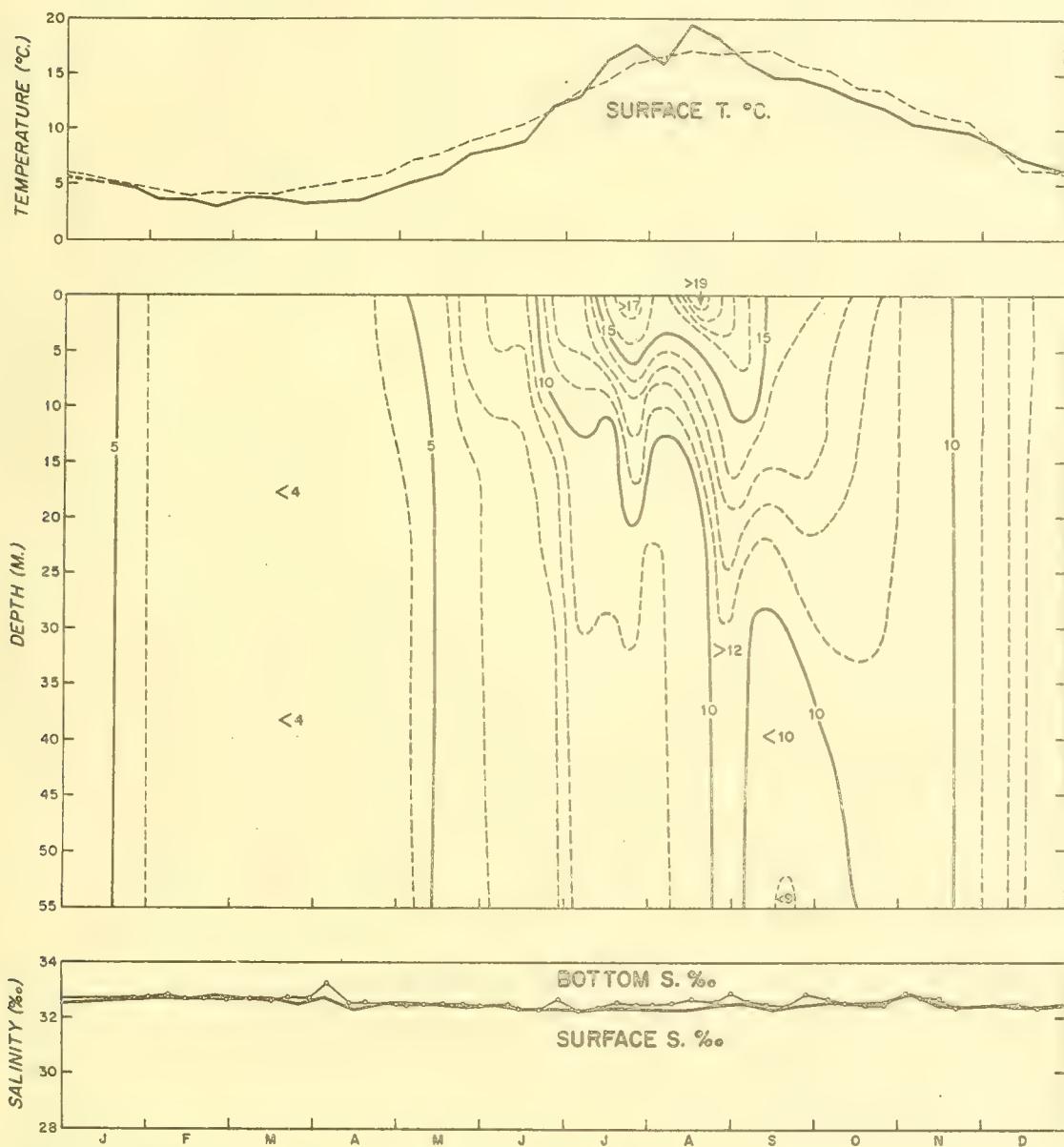


Figure 5.--Nantucket Shoals Lightship, 1965. (The dashed line in the upper diagram is the mean for 1956-64.)

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($40^{\circ}33' N.$, $69^{\circ}28' W.$; water depth: 55 meters)

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
January								
1	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-
22	5.4	5.4	5.4	5.4	5.4	5.4	32.61	
23	5.0	5.0	5.0	5.0	4.9	4.9	32.58	
24	4.0	4.0	4.0	4.0	4.0	4.0	-	
25	5.1	5.2	5.2	5.2	5.2	5.2	32.80	
26	4.4	4.4	4.4	4.3	4.3	4.3	32.76	32.70
27	4.3	4.4	4.6	4.5	4.5	4.4	32.66	
28	3.9	-	-	-	-	-	32.80	
29	4.8	4.9	4.9	4.9	4.9	4.9	32.58	
30	4.4	4.4	4.4	4.3	4.2	4.1	32.74	
31	4.5	4.5	4.5	4.5	4.0	4.0	32.61	
Mean	-	-	-	-	-	-	-	-

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($40^{\circ}33' N.$, $69^{\circ}28' W.$; water depth: 55 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
February								
1	4.1	4.1	4.0	3.9	3.8	3.6	32.65	32.75
2	4.0	4.0	4.0	4.0	-	-	32.65	
3	3.3	-	-	-	-	-	32.78	
4	3.8	3.8	3.7	3.7	3.3	3.3	32.66	
5	3.2	3.2	3.2	3.1	3.1	3.1	32.76	
6	3.9	-	-	-	-	-	32.68	
7	3.5	3.5	3.5	3.4	3.4	3.4	32.78	
8	3.5	3.6	3.5	3.4	3.4	3.3	-	32.82
9	3.6	3.6	3.6	3.5	3.5	3.5	32.78	
10	4.0	4.0	3.9	3.9	3.8	3.8	32.70	
11	3.9	-	-	-	-	-	32.66	
12	4.2	4.2	4.2	4.2	4.2	4.2	32.58	
13	-	-	-	-	-	-	-	
14	2.8	-	-	-	-	-	32.74	32.66
15	3.7	3.8	3.8	3.8	3.9	4.0	32.61	
16	4.4	-	-	-	-	-	32.74	
17	-	-	-	-	-	-	-	
18	3.9	3.9	3.9	3.9	3.9	3.9	32.65	
19	-	-	-	-	-	-	32.73	
20	2.8	-	-	-	-	-	32.69	
21	2.2	-	-	-	-	-	32.79	32.73
22	-	-	-	-	-	-	-	
23	3.3	-	-	-	-	-	32.96	
24	3.3	-	-	-	-	-	32.76	
25	-	-	-	-	-	-	-	
26	-	-	-	-	-	-	-	
27	-	-	-	-	-	-	-	
28	3.3	-	-	-	-	-	32.71	32.62
29								
30								
31								
Mean	3.6	-	-	-	-	-	32.72	32.72

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($40^{\circ}33' N.$, $69^{\circ}28' W.$; water depth: 55 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
March								
1	3.3	-	-	-	-	-	32.77	
2	3.2	3.1	3.1	3.1	3.1	3.1	32.76	
3	5.0	-	-	-	-	-	32.83	
4	3.3	-	-	-	-	-	-	
5	3.3	-	-	-	-	-	32.75	
6	4.0	3.7	3.6	3.5	3.5	3.5	32.78	
7	3.8	3.8	3.8	3.8	3.8	3.8	32.83	32.78
8	4.0	3.9	3.9	3.9	4.0	4.0	32.81	
9	4.4	-	-	-	-	-	32.71	
10	3.9	3.7	3.7	3.5	3.4	3.4	32.71	
11	3.7	3.7	3.7	3.7	3.7	3.7	32.70	
12	3.3	-	-	-	-	-	32.66	
13	3.9	-	-	-	-	-	32.71	
14	4.4	-	-	-	-	-	32.71	32.66
15	3.3	-	-	-	-	-	32.68	
16	3.8	3.6	3.5	3.2	3.3	3.3	32.69	
17	3.9	-	-	-	-	-	32.71	
18	3.9	-	-	-	-	-	32.52	
19	3.6	3.7	3.6	3.7	3.7	3.8	32.62	
20	3.3	-	-	-	-	-	32.78	
21	-	-	-	-	-	-	-	
22	3.3	-	-	-	-	-	32.63	32.72
23	3.3	-	-	-	-	-	32.62	
24	3.3	-	-	-	-	-	32.66	
25	3.8	3.8	3.8	3.7	3.7	3.6	32.60	
26	3.5	3.6	3.6	3.5	3.5	3.5	31.87	
27	3.4	3.4	3.4	3.4	3.3	3.3	32.61	
28	3.7	3.4	3.3	3.3	3.2	3.2	32.60	
29	3.4	3.4	3.4	3.4	3.3	3.3	32.58	32.70
30	3.3	3.3	3.3	3.2	3.2	3.2	32.58	
31	1.7	1.8	1.8	1.7	1.7	1.6	32.58	
Mean	3.6	3.5	3.4	3.4	3.4	3.4	32.66	32.72

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($40^{\circ}33' N.$, $69^{\circ}28' W.$; water depth: 55 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
April								
1	3.3	3.3	3.3	3.2	3.2	3.2	32.91	
2	2.8	-	-	-	-	-	32.67	
3	3.3	3.5	3.4	3.4	3.3	3.3	32.81	
4	3.8	3.6	3.5	3.4	3.4	3.4	32.79	
5	3.6	3.3	3.3	3.3	3.3	3.3	33.03	33.25
6	-	-	-	-	-	-	-	
7	-	-	-	-	-	-	-	
8	3.2	3.2	3.2	3.1	3.1	3.1	33.02	
9	3.4	3.6	3.6	3.5	3.4	3.3	32.54	
10	3.4	3.2	3.3	3.2	-	-	32.54	
11	3.5	3.2	3.2	3.2	3.2	3.2	33.00	
12	3.3	-	-	-	-	-	-	
13	3.5	3.5	3.5	3.4	3.4	3.4	32.57	32.52
14	3.9	-	-	-	-	-	32.48	
15	3.9	3.8	3.7	3.6	3.6	3.6	32.63	
16	3.3	-	-	-	-	-	-	
17	3.5	3.5	3.5	3.4	3.5	3.6	-	
18	3.3	-	-	-	-	-	32.56	
19	3.8	3.8	3.8	3.7	3.7	3.7	32.50	32.58
20	3.3	-	-	-	-	-	30.08	
21	4.0	3.7	3.5	3.5	3.5	3.6	32.48	
22	4.0	3.9	3.6	3.5	3.5	3.5	32.54	
23	4.9	3.9	3.8	3.6	3.6	3.6	32.40	
24	4.0	3.8	3.7	3.6	3.6	3.6	32.39	
25	5.0	3.9	3.9	3.8	3.7	3.7	33.06	
26	4.4	4.0	4.0	3.9	-	-	32.20	
27	4.4	4.0	4.0	-	-	-	-	
28	4.6	4.0	3.9	3.9	3.9	-	-	
29	4.3	4.2	4.1	4.0	4.0	4.0	32.58	
30	4.8	4.1	4.0	3.9	3.9	3.9	32.76	32.51
31								
Mean	3.8	3.7	3.6	3.5	3.5	3.5	32.55	32.72

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($40^{\circ}33' N.$, $69^{\circ}28' W.$; water depth: 55 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
May								
1	5.0	4.1	3.9	3.8	3.6	3.6	32.50	
2	4.4	4.2	3.9	3.7	3.7	3.6	32.70	
3	5.5	4.0	3.5	3.4	3.4	3.4	32.58	
4	5.3	4.2	3.9	3.7	3.7	3.7	32.60	32.49
5	5.0	4.3	4.2	4.0	4.0	4.0	32.53	
6	5.0	4.3	4.1	4.0	4.0	4.0	32.47	
7	4.5	4.3	4.2	4.2	4.2	4.2	32.65	
8	5.6	4.5	4.4	4.4	4.4	4.4	32.81	
9	5.9	5.2	4.6	4.4	4.4	4.4	32.46	
10	5.5	5.3	4.6	4.1	4.1	4.1	32.44	32.48
11	5.0	5.0	4.7	4.6	4.6	4.6	32.54	
12	5.6	4.7	4.6	4.5	4.5	4.4	32.60	
13	6.3	5.7	5.6	5.5	5.5	5.5	32.51	
14	5.6	5.6	5.6	5.5	5.5	5.5	32.48	
15	6.0	5.3	5.8	5.8	5.8	5.8	32.26	
16	5.5	4.3	4.1	4.0	3.9	3.9	32.42	
17	6.0	5.0	4.7	4.7	4.7	4.6	-	32.49
18	6.0	5.8	5.0	4.9	4.9	4.9	32.44	
19	6.5	6.5	6.4	6.4	6.4	6.4	32.61	
20	5.8	5.4	5.3	5.2	5.1	5.1	32.50	
21	5.7	5.4	5.3	5.1	5.1	5.1	32.53	
22	6.5	5.9	5.5	5.3	5.2	5.2	32.46	
23	7.0	6.6	5.5	5.0	4.9	4.9	32.51	
24	7.8	6.3	5.7	5.4	5.3	5.2	32.53	32.45
25	8.7	7.4	6.9	6.8	6.7	6.7	32.42	
26	7.6	7.2	5.8	5.2	5.1	5.0	32.42	
27	8.2	6.9	5.4	5.3	5.2	5.2	-	
28	8.4	8.3	5.9	5.7	5.6	5.5	32.40	
29	8.5	8.4	6.6	5.9	5.9	5.9	32.32	
30	7.8	6.4	6.0	5.5	4.9	4.9	32.21	
31	8.5	6.0	5.1	5.1	5.1	5.1	32.20	32.42
Mean	6.3	5.6	5.1	4.9	4.8	4.8	32.49	32.47

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($40^{\circ}33' N.$, $69^{\circ}28' W.$; water depth: 55 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
June								
1	8.1	7.3	5.5	5.3	5.1	5.1	32.50	
2	6.9	6.8	6.6	6.2	6.1	6.1	32.26	
3	8.3	6.7	4.5	4.4	4.4	4.4	31.78	
4	7.7	7.4	7.4	7.3	7.3	7.3	32.43	
5	7.9	7.7	7.6	7.4	7.4	7.4	32.44	
6	7.9	7.7	7.3	7.0	7.0	6.9	32.41	
7	8.0	7.3	7.6	-	-	-	32.40	
8	8.3	-	-	-	-	-	33.31	
9	9.8	7.1	7.0	6.9	-	-	32.79	
10	8.7	7.6	6.2	6.1	6.0	6.0	-	32.44
11	10.3	7.3	6.6	6.4	6.4	6.3	32.35	
12	9.7	7.6	6.9	6.2	5.4	5.4	32.38	
13	9.4	6.8	6.3	5.9	5.6	5.6	32.32	
14	8.6	7.7	7.5	-	-	-	32.40	32.37
15	9.4	-	-	-	-	-	32.38	
16	7.8	-	-	-	-	-	32.40	
17	7.8	-	-	-	-	-	32.38	
18	8.0	7.0	7.0	7.0	7.0	-	32.34	
19	8.9	-	-	-	-	-	33.81	
20	9.4	6.9	6.8	6.7	6.7	6.7	30.92	
21	10.0	8.2	7.5	7.4	7.3	7.3	32.44	32.26
22	9.9	9.3	7.7	7.6	7.2	6.9	32.30	
23	10.1	7.8	7.0	6.9	6.4	(6.3)	32.28	
24	10.1	10.1	6.9	6.1	6.0	-	32.85	
25	11.8	10.5	7.3	6.9	6.9	6.9	32.29	
26	12.6	10.6	7.4	7.0	7.0	-	32.29	
27	13.3	9.3	7.9	7.0	6.9	(6.8)	32.28	
28	14.0	9.8	7.7	6.3	6.0	(6.0)	32.23	32.63
29	14.0	13.4	9.7	6.6	6.4	-	32.27	
30	14.0	11.3	8.3	6.1	5.9	-	32.30	
31								
Mean	9.7	8.4	7.1	6.6	6.4	6.3	32.40	32.42

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($40^{\circ}33' N.$, $69^{\circ}28' W.$; water depth: 55 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
July								
1	13.7	11.6	8.7	8.2	7.1	-	32.22	
2	10.4	9.5	9.4	8.5	7.8	-	32.05	
3	10.6	9.6	9.3	8.6	8.4	-	32.16	
4	15.5	11.9	10.3	9.5	9.4	(9.4)	32.55	
5	13.5	12.1	11.9	11.5	10.9	(10.9)	32.19	32.26
6	14.3	12.0	10.6	9.6	9.1	9.1	32.71	
7	15.0	11.2	10.7	10.0	9.4	-	32.20	
8	10.9	10.5	10.3	9.0	8.4	8.3	32.14	
9	11.5	9.3	7.0	6.2	6.1	6.1	32.34	
10	13.3	11.7	10.6	9.2	8.5	8.4	32.16	
11	14.4	9.8	7.1	6.6	5.8	5.5	32.18	
12	14.9	8.2	7.0	6.7	5.8	5.6	32.06	32.36
13	14.6	12.9	12.2	10.9	10.8	10.8	32.18	
14	15.4	7.1	7.0	6.5	6.1	6.1	32.14	
15	15.6	14.0	7.9	6.9	6.5	5.3	32.03	
16	17.5	11.3	9.4	8.9	8.2	8.1	32.18	
17	17.5	11.4	10.4	9.7	9.2	9.1	32.13	
18	17.5	10.4	10.2	10.1	9.5	9.3	32.10	
19	18.5	12.8	11.8	11.5	11.1	11.0	32.11	32.56
20	16.0	12.0	10.1	9.6	8.9	8.9	32.71	
21	17.3	14.3	11.6	8.7	8.4	8.4	32.96	
22	18.6	17.2	13.3	9.8	8.7	8.6	32.36	
23	18.4	14.3	11.6	9.8	8.4	8.4	32.32	
24	18.5	14.9	12.9	8.7	8.4	8.3	32.25	
25	18.4	17.7	14.5	8.3	8.1	8.1	32.30	
26	19.4	13.5	11.3	8.3	7.8	7.8	32.12	32.44
27	20.2	14.8	12.2	11.4	10.6	10.4	32.13	
28	19.3	10.2	9.9	9.3	8.7	8.7	32.14	
29	12.5	9.5	9.0	8.9	8.8	8.8	32.34	
30	12.7	9.9	9.8	9.7	9.7	9.7	32.32	
31	18.0	13.7	9.3	9.2	8.9	8.9	32.46	
Mean	15.6	11.9	10.4	9.2	8.5	8.4	32.27	32.40

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($40^{\circ}33' N.$, $69^{\circ}28' W.$; water depth: 55 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
August 1	18.5	16.1	10.9	8.3	8.4	8.5	32.20	
2	17.4	11.0	9.0	9.0	9.0	9.0	32.28	32.46
3	14.7	11.6	9.2	8.9	8.2	8.2	32.47	
4	15.2	10.2	9.1	8.9	8.7	8.7	32.33	
5	16.1	9.1	9.0	8.5	8.1	-	32.30	
6	12.8	-	-	-	-	-	32.24	
7	15.0	-	-	-	-	-	32.28	
8	17.8	-	-	-	-	-	32.29	
9	13.9	-	-	-	-	-	32.26	32.52
10	17.2	-	-	-	-	-	32.28	
11	19.4	-	-	-	-	-	32.29	
12	18.4	-	-	-	-	-	32.38	
13	18.9	-	-	-	-	-	32.36	
14	15.6	-	-	-	-	-	32.30	
15	15.6	-	-	-	-	-	32.32	
16	21.7	-	-	-	-	-	32.29	32.63
17	20.0	-	-	-	-	-	32.25	
18	21.1	-	-	-	-	-	32.36	
19	22.2	-	-	-	-	-	32.47	
20	20.6	-	-	-	-	-	31.96	
21	21.1	-	-	-	-	-	32.37	
22	22.2	-	-	-	-	-	32.78	
23	20.0	-	-	-	-	-	32.22	
24	18.0	-	-	-	-	-	32.25	
25	16.7	-	-	-	-	-	32.34	32.58
26	20.0	-	-	-	-	-	32.53	
27	21.1	-	-	-	-	-	32.36	
28	20.6	-	-	-	-	-	32.37	
29	11.7	-	-	-	-	-	32.43	
30	12.8	-	-	-	-	-	32.42	32.84
31	15.5	15.1	14.3	13.0	12.0	11.9	32.48	
Mean	17.8	-	-	-	-	-	32.34	32.61

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($40^{\circ}33' N.$, $69^{\circ}28' W.$; water depth: 55 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
September								
1	16.2	15.8	11.6	11.1	10.7	10.7	32.36	
2	-	-	-	-	-	-	-	
3	15.6	-	-	-	-	-	32.47	
4	15.4	15.1	13.1	9.8	8.6	8.5	33.28	
5	16.5	-	-	-	-	-	32.84	
6	16.7	-	-	-	-	-	32.48	32.57
7	-	-	-	-	-	-	-	
8	15.6	-	-	-	-	-	32.28	
9	16.5	16.4	16.1	10.3	9.5	9.3	32.26	
10	15.7	15.4	14.6	9.1	9.0	9.0	32.27	
11	16.0	15.6	15.4	9.9	8.3	8.0	32.24	
12	16.1	-	-	-	-	-	32.27	
13	14.0	14.0	14.0	9.1	8.0	8.0	32.19	32.46
14	14.8	14.8	14.5	9.9	8.8	8.8	32.13	
15	13.9	13.7	13.1	9.1	9.3	9.3	32.17	
16	16.1	-	-	-	-	-	32.18	
17	14.0	12.6	10.9	8.9	8.7	8.7	32.67	
18	15.5	14.8	13.4	11.5	11.0	10.9	32.42	
19	14.3	14.1	12.9	9.3	8.6	(8.5)	32.21	
20	12.5	11.6	10.8	10.0	9.7	(9.4)	32.24	32.40
21	14.0	11.9	11.2	10.1	9.8	9.1	32.25	
22	15.0	11.5	11.3	11.0	10.0	9.0	32.21	
23	14.9	11.9	11.5	9.9	9.9	9.3	32.19	
24	12.3	10.6	10.3	9.9	9.4	9.5	32.24	
25	17.6	15.0	16.5	9.7	8.1	8.0	32.43	
26	16.0	16.7	15.5	10.7	9.1	8.7	32.64	
27	15.2	15.2	15.3	9.5	8.3	8.1	32.97	32.84
28	13.5	13.6	13.2	10.6	10.4	10.2	32.39	
29	12.8	12.8	12.9	11.7	9.3	9.3	32.43	
30	13.5	13.5	13.4	12.9	10.0	9.7	32.61	
31								
Mean	15.0	13.9	13.2	10.2	9.3	9.1	32.40	32.57

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity (‰), 1965 ($40^{\circ}33' \text{ N.}$, $69^{\circ}28' \text{ W.}$; water depth: 55 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
October								
1	15.0	-	-	-	-	-	32.68	
2	15.0	-	-	-	-	-	32.67	
3	15.0	-	-	-	-	-	32.52	
4	15.0	-	-	-	-	-	-	
5	12.2	-	-	-	-	-	32.58	32.66
6	12.2	-	-	-	-	-	32.71	
7	13.3	-	-	-	-	-	32.53	
8	13.3	-	-	-	-	-	32.67	
9	13.3	-	-	-	-	-	32.44	
10	13.3	-	-	-	-	-	32.51	
11	12.8	-	-	-	-	-	32.37	32.56
12	13.3	-	-	-	-	-	32.52	
13	12.8	-	-	-	-	-	32.36	
14	13.3	-	-	-	-	-	32.50	
15	12.8	-	-	-	-	-	33.10	
16	12.8	-	-	-	-	-	32.43	
17	12.2	-	-	-	-	-	32.69	
18	12.2	-	-	-	-	-	32.40	32.42
19	12.2	-	-	-	-	-	32.40	
20	12.8	-	-	-	-	-	32.40	
21	13.3	-	-	-	-	-	32.38	
22	12.3	12.2	12.2	11.6	11.1	11.0	32.30	
23	12.6	12.4	11.9	10.5	10.4	10.3	32.38	
24	12.2	-	-	-	-	-	32.39	
25	11.7	11.6	11.5	11.0	10.8	10.7	32.36	32.49
26	11.5	11.5	11.4	11.3	10.8	10.8	32.51	
27	11.7	11.7	11.6	11.2	10.8	10.7	32.45	
28	11.5	11.4	11.4	11.4	10.5	10.5	32.70	
29	11.1	10.9	10.3	8.9	8.8	8.8	32.66	
30	11.5	11.4	11.4	11.4	11.2	11.1	33.58	
31	11.1	11.1	11.1	11.1	10.6	10.4	32.45	
Mean	12.8	-	-	-	-	-	32.55	32.53

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($40^{\circ}33' N.$, $69^{\circ}28' W.$; water depth: 55 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
November								
1	10.6	-	-	-	-	-	-	
2	10.6	10.8	10.8	10.7	10.0	-	33.95	
3	10.8	10.7	10.7	10.6	10.6	10.6	32.44	32.89
4	10.8	10.5	10.5	10.5	-	-	33.28	
5	10.4	10.4	10.4	10.3	10.0	9.9	32.93	
6	10.4	10.3	10.2	10.2	10.0	9.9	32.48	
7	10.5	10.4	10.4	10.4	10.1	10.1	32.65	
8	10.5	10.3	10.3	10.1	10.0	(10.0)	32.43	32.73
9	10.6	10.5	10.4	10.1	10.1	10.1	32.97	
10	10.2	10.0	10.0	10.1	10.1	10.1	32.36	
11	10.2	10.1	10.1	9.9	9.8	9.8	32.34	
12	10.3	10.2	10.2	10.1	10.1	10.0	32.54	
13	10.6	-	-	-	-	-	32.35	
14	10.2	10.0	10.0	10.0	9.9	9.9	32.44	
15	10.0	-	-	-	-	-	32.48	32.67
16	10.7	10.7	10.7	10.7	10.7	10.7	32.44	
17	10.0	9.9	9.9	10.0	10.0	10.0	32.40	
18	10.0	10.0	10.0	-	-	-	32.39	
19	9.9	10.1	10.1	10.1	10.1	-	32.36	
20	10.0	9.9	9.9	-	-	-	32.37	
21	9.7	9.7	9.6	9.6	9.7	9.8	32.38	32.39
22	9.7	9.7	9.7	9.8	9.8	9.9	32.40	
23	9.4	9.4	9.5	9.6	9.6	-	32.36	
24	9.0	9.6	-	-	-	-	32.42	
25	10.0	10.0	10.0	-	-	-	32.45	
26	9.6	9.5	9.3	9.2	-	-	32.38	
27	10.6	10.6	10.7	10.8	(10.8)	-	32.38	
28	9.5	9.5	9.5	9.6	9.7	9.8	32.37	
29	9.9	9.8	9.8	9.9	9.9	9.9	32.44	
30	9.7	9.7	9.7	9.8	9.9	9.9	32.44	
31								
Mean	10.1	10.1	10.1	10.1	10.0	10.0	32.54	32.67

Table 5.--Nantucket Shoals Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($40^{\circ}33' N.$, $69^{\circ}28' W.$; water depth: 55 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	55 m.	0 m.	55 m.
December								
1	8.1	8.1	8.1	8.1	8.1	8.1	32.46	
2	8.0	8.0	8.0	8.0	8.0	8.0	32.46	
3	9.1	9.2	9.2	9.2	9.2	9.2	32.42	
4	9.0	9.0	9.0	9.0	9.0	9.0	32.43	
5	9.0	9.0	9.0	9.0	9.1	9.1	32.44	
6	10.1	10.1	10.1	10.1	10.1	-	32.48	
7	10.1	10.2	10.2	10.3	10.5	-	32.48	
8	8.5	8.5	8.6	8.8	8.9	-	32.53	
9	7.7	7.6	7.6	7.6	7.6	7.5	32.46	
10	7.5	7.5	7.5	7.5	7.4	7.4	32.46	
11	7.4	7.2	7.2	7.2	7.2	7.2	32.46	
12	7.8	7.8	7.8	7.8	7.8	7.9	32.58	
13	7.5	7.5	7.5	7.6	7.5	7.5	32.30	32.43
14	7.8	-	-	-	-	-	32.36	
15	7.3	7.4	7.3	-	-	-	32.31	
16	6.9	6.8	6.8	6.8	6.8	6.8	32.41	
17	7.1	6.9	6.8	6.7	6.7	6.6	32.38	
18	7.0	6.8	6.8	6.9	6.9	6.9	32.42	
19	7.0	7.1	7.1	7.1	7.1	7.1	32.43	
20	6.3	6.2	6.1	6.0	6.0	6.0	32.39	32.35
21	7.0	7.0	7.0	6.8	6.6	6.4	32.39	
22	6.4	6.5	6.3	6.2	-	-	32.44	
23	7.0	7.0	7.0	7.0	6.9	6.9	32.43	
24	7.4	7.4	7.4	7.0	7.0	7.0	32.42	
25	6.8	6.8	6.8	6.7	6.5	-	32.36	
26	-	-	-	-	-	-	-	
27	5.6	-	-	-	-	-	32.53	
28	4.7	4.7	4.7	4.6	4.4	4.4	32.43	
29	6.6	6.5	6.5	6.5	6.5	6.5	32.48	
30	7.2	7.1	7.1	7.0	7.0	6.8	32.44	
31	7.0	7.0	6.7	5.9	5.9	5.9	32.45	
Mean	7.5	7.5	7.5	7.5	7.5	7.2	32.43	

Woods Hole, Massachusetts, Woods Hole Oceanographic Institution Pier
(fig. 6, table 6)

Surface water temperatures were preponderantly subnormal in all seasons but there were only six new record low decades. The anomalies are generally smaller than those at Nantucket Shoals lightship although in considering the relative continentality of these two locations one would expect the opposite result.

Surface salinity ranged between 31.50 ‰ and 31.60 ‰ for the decades from early January through early June, rose irregularly through the summer, and was between 32.00 ‰ and 32.49 ‰ for the last third of the year.

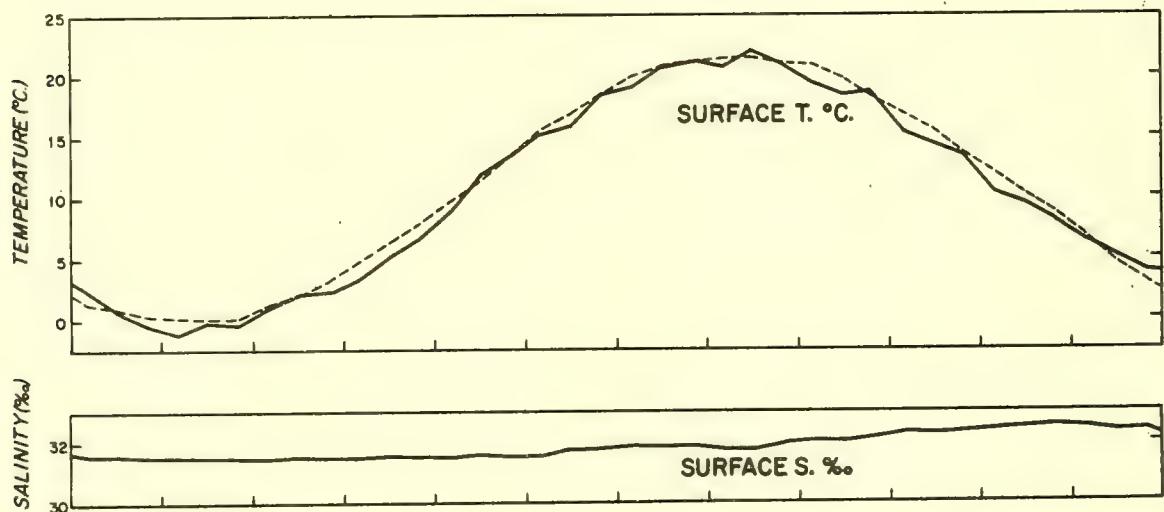


Figure 6.--Woods Hole, Massachusetts, 1965. (The dashed line is the mean for 1956-64.)

Table 6.--Woods Hole, Mass.: surface water temperature ($^{\circ}$ C.)
and salinity ($^{\circ}/oo$), 1965 (41 $^{\circ}$ 31.4' N., 70 $^{\circ}$ 40.3' W.)

Month and day	Temper- ature	Salinity
January		
1	3.6	-
2	2.5	31.53
3	2.7	-
4	2.1	31.55
5	1.9	31.53
6	2.3	31.51
7	2.0	31.66
8	2.2	31.70
9	2.7	31.70
10	2.8	-
11	2.2	31.54
12	2.1	31.48
13	2.3	31.54
14	2.1	31.62
15	0.7	31.62
16	0.7	-
17	-0.2	-
18	-0.4	31.66
19	-0.4	31.62
20	-0.3	31.76
21	-0.2	31.67
22	-0.1	31.63
23	0.0	-
24	-0.4	-
25	-0.5	31.44
26	-0.4	31.52
27	0.0	31.53
28	-0.3	31.51
29	-0.5	31.58
30	-1.1	-
31	-1.3	-
Mean	+0.9	31.59

Month and day	Temper- ature	Salinity
February		
1	-1.4	31.57
2	-1.0	31.50
3	-1.4	31.52
4	-1.5	31.62
5	-1.7	31.70
6	-1.4	31.62
7	-	-
8	-0.4	31.45
9	-0.6	31.48
10	-0.3	31.53
11	0.0	31.56
12	0.0	31.62
13	-	-
14	-0.3	31.59
15	-0.4	31.58
16	-0.3	31.42
17	0.0	31.58
18	0.0	31.43
19	-0.3	31.47
20	-	-
21	-	-
22	-0.6	31.55
23	-1.4	31.54
24	-1.1	31.54
25	-0.6	31.61
26	0.0	31.45
27	-	-
28	+0.6	31.42
29		
30		
31		
Mean	-1.2	31.54

Table 6.--Woods Hole, Mass.: surface water temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($41^{\circ}31.4' N.$, $70^{\circ}40.3' W.$)--Continued

Month and day	Temper-ature	Salinity	Month and day	Temper-ature	Salinity
March			April		
1	0.0	31.52	1	2.4	31.51
2	0.2	31.48	2	2.8	31.48
3	0.4	31.46	3	3.2	31.49
4	0.6	31.53	4	-	-
5	1.2	31.58	5	3.3	31.59
6	-	-	6	3.9	31.62
7	1.7	31.43	7	3.9	31.59
8	1.2	31.44	8	3.9	31.49
9	1.7	31.53	9	4.1	31.39
10	1.8	31.38	10	-	-
11	2.1	31.55	11	-	-
12	1.6	31.59	12	4.3	31.62
13	-	-	13	4.6	31.63
14	2.4	31.58	14	4.5	31.64
15	2.2	31.54	15	5.0	31.68
16	2.2	31.58	16	5.3	31.48
17	2.2	31.56	17	5.8	31.57
18	2.2	31.57	18	-	-
19	2.2	31.48	19	5.7	31.54
20	-	-	20	5.6	31.59
21	1.9	31.57	21	5.8	31.59
22	1.7	31.59	22	6.2	31.55
23	2.2	31.59	23	6.4	31.53
24	2.4	31.61	24	-	-
25	2.2	31.65	25	-	-
26	2.5	31.51	26	6.6	31.59
27	-	-	27	6.7	31.47
28	2.9	31.48	28	6.7	31.60
29	2.8	31.56	29	6.8	31.54
30	2.5	31.48	30	7.5	31.49
31	2.2	31.46	31		
Mean	1.8	31.53	Mean	5.0	31.55

Table 6.--Woods Hole, Mass.: surface water temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$), 1965 ($41^{\circ}31.4' N.$, $70^{\circ}40.3' W.$)--Continued

Month and day	Temper- ature	Salinity	Month and day	Temper- ature	Salinity
May			June		
1	-	-	1	14.4	31.70
2	-	-	2	15.0	31.70
3	8.2	31.57	3	14.4	31.50
4	8.6	31.60	4	14.4	31.52
5	9.1	31.52	5	-	-
6	9.3	31.39	6	-	-
7	8.9	31.42	7	15.3	31.52
8	-	-	8	15.8	31.55
9	-	-	9	16.1	31.54
10	10.2	31.49	10	16.4	31.57
11	10.6	31.58	11	16.4	31.55
12	11.1	31.54	12	-	-
13	11.4	31.62	13	-	-
14	11.4	31.64	14	16.6	31.67
15	-	-	15	15.8	31.71
16	-	-	16	15.6	31.82
17	12.5	31.62	17	15.4	31.90
18	12.5	31.64	18	15.6	31.92
19	12.2	31.58	19	-	-
20	12.8	31.68	20	-	-
21	12.7	31.54	21	17.3	31.62
22	-	-	22	17.8	31.71
23	-	-	23	17.9	31.74
24	12.7	31.63	24	18.9	31.79
25	12.9	31.63	25	18.6	31.79
26	12.0	31.60	26	18.4	-
27	14.2	31.58	27	18.6	-
28	14.3	31.16	28	19.1	31.84
29	-	-	29	18.8	31.85
30	14.0	31.68	30	-	31.90
31	14.6	31.70	31		
Mean	11.6	31.56	Mean	16.6	31.70

Table 6.--Woods Hole, Mass.: surface water temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($41^{\circ}31.4' N.$, $70^{\circ}40.3' W.$)--Continued

Month and day	Temper- ature	Salinity	Month and day	Temper- ature	Salinity
July			August		
1	18.6	31.92	1	20.9	31.95
2	18.6	31.98	2	20.3	31.90
3	19.1	-	3	19.8	31.67
4	19.0	-	4	20.2	31.61
5	19.0	31.82	5	20.3	31.83
6	19.2	31.80	6	20.8	31.45
7	18.9	31.90	7	21.1	-
8	18.7	31.47	8	21.4	-
9	19.2	31.92	9	21.5	31.84
10	19.9	-	10	21.1	31.86
11	19.8	-	11	21.4	31.88
12	20.1	31.84	12	21.2	31.88
13	19.8	31.88	13	21.7	31.88
14	20.8	31.81	14	21.4	-
15	20.9	31.84	15	21.7	-
16	20.8	31.86	16	22.1	31.90
17	20.8	-	17	22.5	31.74
18	21.2	-	18	22.8	31.48
19	21.2	31.67	19	22.9	31.63
20	20.7	31.85	20	22.1	31.74
21	21.3	31.89	21	21.9	-
22	21.2	31.56	22	21.0	-
23	20.8	31.59	23	20.8	31.61
24	21.3	-	24	21.3	31.92
25	20.8	-	25	21.7	31.92
26	21.8	31.87	26	21.3	31.94
27	21.3	31.92	27	20.9	32.00
28	21.4	31.90	28	21.4	-
29	21.3	31.90	29	20.4	-
30	21.1	31.92	30	19.7	32.01
31	20.9	-	31	19.5	31.96
Mean	20.3	31.82	Mean	21.9	31.81

Table 6.--Woods Hole, Mass.: surface water temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($41^{\circ}31.4' N.$, $70^{\circ}40.3' W.$)--Continued

Month and day	Temper- ature	Salinity	Month and day	Temper- ature	Salinity
September			October		
1	19.6	31.98	1	17.2	32.16
2	20.0	31.93	2	17.0	-
3	20.2	31.96	3	16.8	-
4	19.7	-	4	15.5	32.32
5	19.2	-	5	14.3	32.25
6	18.8	31.97	6	13.7	32.25
7	19.2	32.02	7	14.2	32.23
8	18.8	32.04	8	14.4	32.22
9	18.9	32.07	9	14.8	32.20
10	18.9	32.14	10	14.7	-
11	19.2	-	11	14.4	32.24
12	19.0	-	12	14.8	-
13	18.4	32.17	13	14.1	32.22
14	17.9	32.02	14	14.3	32.15
15	18.1	32.12	15	14.6	32.26
16	18.6	31.98	16	14.6	-
17	18.0	31.97	17	14.0	-
18	18.3	-	18	13.7	32.22
19	18.0	-	19	13.9	32.20
20	18.4	32.06	20	14.4	32.21
21	18.7	32.05	21	14.5	32.20
22	18.4	32.04	22	14.4	32.19
23	18.9	32.06	23	14.2	-
24	19.1	32.04	24	14.2	-
25	18.8	-	25	13.6	32.27
26	18.7	-	26	13.4	32.28
27	17.9	32.03	27	13.6	32.29
28	-	32.18	28	12.8	32.32
29	-	32.06	29	11.9	32.32
30	-	32.07	30	11.6	-
31			31	12.2	32.38
Mean	18.8	32.04	Mean	14.3	32.24

Table 6.--Woods Hole, Mass.: surface water temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($41^{\circ}31.4' N.$, $70^{\circ}40.3' W.$)--Continued

Month and day	Temper- ature	Salinity	Month and day	Temper- ature	Salinity
November			December		
1	11.3	32.32	1	6.6	32.42
2	10.3	32.35	2	6.7	32.43
3	11.0	32.39	3	6.8	32.46
4	11.0	32.57	4	7.1	-
5	9.6	32.40	5	6.3	-
6	10.3	32.38	6	6.4	32.47
7	10.5	-	7	5.9	32.47
8	10.0	32.42	8	5.6	32.47
9	9.9	32.32	9	5.6	32.44
10	9.2	32.38	10	5.9	32.46
11	9.4	-	11	5.8	-
12	9.7	32.42	12	5.4	-
13	9.8	32.38	13	5.3	32.43
14	9.8	-	14	4.9	32.32
15	9.7	32.39	15	4.8	32.33
16	9.6	32.42	16	5.3	32.32
17	10.1	32.37	17	5.3	32.33
18	8.4	32.44	18	4.9	-
19	8.4	32.45	19	4.8	-
20	7.9	-	20	4.4	32.39
21	8.7	-	21	3.4	32.33
22	8.7	32.81	22	3.6	32.43
23	8.1	32.37	23	4.0	32.44
24	7.8	32.39	24	4.1	-
25	7.7	-	25	4.4	-
26	8.1	32.44	26	4.2	32.42
27	8.3	-	27	3.4	32.41
28	8.3	-	28	3.1	32.36
29	7.3	32.50	29	3.7	32.37
30	7.1	32.42	30	4.1	32.38
31	--		31	4.2	32.39
Mean	9.2	32.42	Mean	5.0	32.40

Buzzards Bay Entrance Light Station (fig. 7, table 7)

Surface temperatures were new record lows in 12 decades. Temperatures were generally below normal in all seasons.

Surface salinity was very close to 32.00 ‰ through mid-September, and from late September through December it was close to 32.20 ‰.

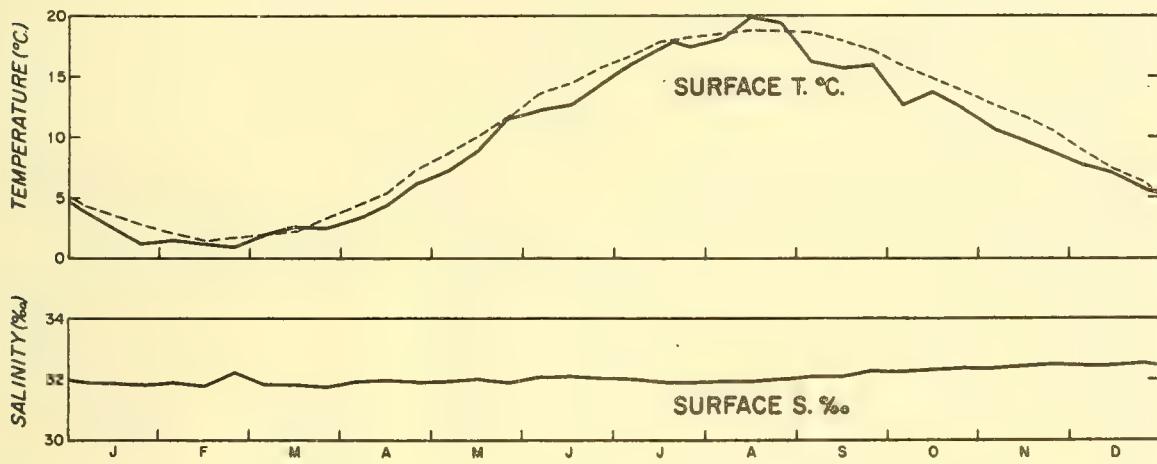


Figure 7.--Buzzards Bay Entrance Light Station, 1965. (The dashed line is the mean for 1956-64.)

Table 7.--Buzzards Bay Entrance Light Station: surface water temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965
 (41 $^{\circ}$ 23.8' N., 71 $^{\circ}$ 02.0' W.)

Month and day	Temper-ature	Salinity	Month and day	Temper-ature	Salinity
January			February		
1	2.2	31.94	1	0.8	31.91
2	4.7	31.92	2	0.6	31.85
3	3.6	31.85	3	1.1	31.92
4	3.6	31.80	4	1.1	31.81
5	3.9	31.80	5	1.7	31.69
6	5.1	31.87	6	1.7	32.03
7	4.4	31.90	7	2.2	31.93
8	3.4	31.90	8	2.2	31.90
9	4.6	31.97	9	1.2	31.82
10	3.7	31.91	10	1.1	31.83
11	3.6	31.90	11	1.4	31.83
12	3.3	31.96	12	1.4	31.82
13	4.4	31.92	13	1.4	31.83
14	3.3	31.90	14	1.1	31.76
15	2.8	32.04	15	1.4	31.91
16	0.0	31.95	16	1.5	31.74
17	0.8	31.94	17	1.1	31.69
18	2.2	31.94	18	1.9	31.89
19	1.7	31.93	19	1.0	31.83
20	1.9	31.86	20	0.3	31.69
21	0.8	31.84	21	1.2	32.17
22	1.4	31.82	22	1.9	32.08
23	0.8	31.83	23	0.9	32.83
24	0.6	31.83	24	0.5	31.95
25	1.7	31.82	25	-	-
26	1.1	32.01	26	0.6	32.56
27	1.1	31.82	27	-0.2	31.99
28	1.2	31.81	28	+1.4	31.94
29	1.2	31.64	29		
30	1.3	31.69	30		
31	1.0	31.70	31		
Mean	2.4	31.87	Mean	1.2	31.93

Table 7.--Buzzards Bay Entrance Light Station: surface water temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965
 $(41^{\circ}23.8' N., 71^{\circ}02.0' W.)$ --Continued

Month and day	Temper-ature	Salinity	Month and day	Temper-ature	Salinity
March			April		
1	0.8	31.78	1	2.6	31.71
2	1.4	31.79	2	2.8	31.89
3	1.4	31.82	3	2.6	31.92
4	1.6	31.84	4	2.8	31.93
5	1.9	31.91	5	2.9	31.90
6	2.2	31.91	6	3.3	31.99
7	2.2	31.86	7	3.3	31.92
8	1.9	31.82	8	3.6	31.95
9	2.2	31.90	9	3.6	31.91
10	2.2	31.91	10	3.7	31.90
11	1.9	31.75	11	3.7	31.89
12	1.7	31.63	12	3.7	31.91
13	2.8	31.75	13	3.6	31.90
14	2.6	31.89	14	4.2	31.90
15	2.6	31.91	15	4.4	31.92
16	2.8	31.91	16	4.6	32.01
17	2.8	31.89	17	4.6	32.34
18	2.8	31.93	18	4.6	31.88
19	2.8	31.95	19	4.5	31.88
20	2.2	31.89	20	4.7	31.91
21	1.7	31.91	21	5.9	31.97
22	1.7	31.66	22	5.6	31.83
23	2.2	31.68	23	6.7	31.83
24	2.2	31.74	24	3.3	31.98
25	2.1	31.78	25	6.7	31.87
26	2.4	31.82	26	7.2	31.90
27	2.6	31.82	27	7.8	31.90
28	2.7	31.73	28	6.1	31.91
29	2.5	31.91	29	5.8	31.91
30	2.5	31.91	30	6.1	31.94
31	2.2	31.76	31		
Mean	2.2	31.83	Mean	4.5	31.92

Table 7.--Buzzards Bay Entrance Light Station: surface water temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965
 (41°23.8' N., 71°02.0' W.)--Continued

Month and day	Temper-ature	Salinity	Month and day	Temper-ature	Salinity
May			June		
1	6.9	31.99	1	11.3	32.07
2	6.5	31.96	2	11.3	32.17
3	6.7	32.04	3	10.8	32.17
4	6.7	31.96	4	11.9	32.05
5	6.7	32.01	5	12.1	32.05
6	7.1	31.94	6	12.3	32.02
7	7.1	31.94	7	12.7	31.97
8	7.2	32.01	8	12.8	32.12
9	7.8	31.94	9	12.8	32.07
10	8.9	31.77	10	13.3	32.01
11	8.3	32.03	11	12.2	32.09
12	8.6	31.99	12	12.8	32.10
13	8.6	32.00	13	11.7	32.12
14	8.3	32.00	14	11.7	32.14
15	8.3	32.02	15	12.2	32.11
16	8.9	32.01	16	12.2	32.07
17	8.9	31.99	17	12.2	32.08
18	9.4	32.00	18	13.3	32.10
19	9.4	32.04	19	12.8	31.99
20	9.4	32.03	20	14.0	32.06
21	10.0	32.12	21	15.0	32.01
22	10.0	31.81	22	15.0	32.03
23	11.7	31.79	23	12.2	32.08
24	11.7	32.04	24	13.9	32.05
25	11.4	31.92	25	14.4	32.06
26	11.8	31.76	26	13.9	32.10
27	12.1	31.79	27	13.9	32.08
28	12.6	31.78	28	14.4	32.08
29	12.1	31.98	29	15.0	32.09
30	11.4	32.04	30	15.0	32.09
31	10.1	32.10	31		
Mean	9.2	31.96	Mean	13.0	32.07

Table 7.--Buzzards Bay Entrance Light Station: surface water temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$), 1965
 $(41^{\circ}23.8' N., 71^{\circ}02.0' W.)$ --Continued

Month and day	Temper-ature	Salinity	Month and day	Temper-ature	Salinity
July			August		
1	13.9	32.10	1	17.0	31.91
2	14.4	32.08	2	17.5	31.96
3	15.6	32.02	3	17.0	31.97
4	16.1	32.02	4	18.0	32.12
5	16.7	31.99	5	17.5	31.95
6	16.7	32.00	6	17.4	32.02
7	16.7	31.97	7	18.4	31.94
8	16.1	31.94	8	18.9	32.01
9	17.8	32.02	9	19.4	31.88
10	16.1	32.00	10	18.7	31.96
11	-	-	11	18.9	31.92
12	-	-	12	18.9	31.93
13	-	-	13	17.5	31.97
14	-	-	14	19.5	31.94
15	-	-	15	19.0	31.98
16	-	31.89	16	21.0	32.00
17	-	31.89	17	20.5	31.95
18	-	31.96	18	20.5	31.97
19	17.8	31.83	19	22.4	32.01
20	17.8	31.83	20	20.9	31.95
21	17.8	31.87	21	20.6	32.11
22	18.0	31.86	22	20.9	31.99
23	17.8	31.89	23	20.0	31.94
24	17.5	31.91	24	19.5	31.95
25	17.8	31.91	25	20.0	31.95
26	18.1	31.91	26	20.0	32.01
27	17.2	31.92	27	19.2	31.99
28	17.1	31.90	28	19.0	31.99
29	17.0	31.92	29	18.6	32.00
30	16.5	31.93	30	18.2	32.05
31	17.0	31.92	31	16.7	32.05
Mean	16.8	31.94	Mean	19.1	31.98

Table 7.--Buzzards Bay Entrance Light Station: surface water temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965
 (41 $^{\circ} 23.8' N.$, 71 $^{\circ} 02.0' W.$)--Continued

Month and day	Temper-ature	Salinity	Month and day	Temper-ature	Salinity
September			October		
1	15.5	32.13	1	15	32.24
2	16.5	32.04	2	15	32.21
3	16.1	32.09	3	15.2	32.17
4	16.0	32.07	4	15	32.20
5	17.0	32.10	5	13	32.22
6	16.6	32.12	6	10.5	32.22
7	16.8	32.11	7	10.5	32.28
8	15.8	32.16	8	10.5	32.28
9	15.5	32.12	9	10.8	32.27
10	15.8	32.12	10	11.0	32.28
			11	11.0	32.28
11	15.8	32.10	12	14.0	32.34
12	15.2	32.18	13	13.8	32.32
13	15.5	32.16	14	14.0	32.28
14	15.1	32.09	15	14.0	32.28
15	15.5	32.08	16	13.8	32.29
16	15.2	32.10	17	13.8	32.32
17	15.2	32.14	18	13.8	32.34
18	15.5	32.22	19	13.7	32.27
19	16.5	32.21	20	13.9	32.28
20	16.5	32.11			
			21	-	-
21	16.5	32.22	22	13.9	32.40
22	16.5	32.26	23	14.0	32.40
23	16.5	32.50	24	14.0	32.40
24	16.2	32.13	25	12.8	32.41
25	16.2	32.58	26	10.8	32.39
26	16.2	32.20	27	10.8	32.35
27	16.1	32.25	28	10.8	32.40
28	15.1	32.20	29	10.8	32.38
29	15.1	32.21	30	14.8	32.31
30	15.0	32.11	31	10.5	32.29
31					
Mean	15.9	32.17	Mean	12.8	32.30

Table 7.--Buzzards Bay Entrance Light Station: surface water temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965
 (41 $^{\circ}23.8' N.$, 71 $^{\circ}02.0' W.$)--Continued

Month and day	Temper-ature	Salinity
November		
1	10	32.37
2	10	32.36
3	10.8	32.36
4	11.5	32.40
5	10.6	32.34
6	10.6	32.33
7	10.8	32.36
8	10.8	32.37
9	10.7	32.39
10	10.5	32.42
11	10.5	32.44
12	10.6	32.44
13	10.8	32.40
14	10.5	32.42
15	10.1	32.42
16	9.8	32.42
17	9.6	32.43
18	7.2	32.45
19	8.6	32.38
20	8.6	32.44
21	8.9	32.41
22	9.5	32.47
23	8.0	32.43
24	9.1	32.43
25	8.3	32.44
26	8.8	32.46
27	8.6	32.45
28	8.1	32.46
29	8.0	32.47
30	8.4	32.44
31		
Mean	9.6	32.41

Month and day	Temper-ature	Salinity
December		
1	7.9	32.48
2	7.8	32.42
3	7.5	32.42
4	7.8	32.48
5	7.5	32.36
6	7.5	32.35
7	7.7	32.36
8	7.0	32.48
9	7.4	32.49
10	7.8	32.48
11	7.2	32.57
12	7.0	32.51
13	7.7	32.51
14	6.5	32.48
15	7.0	32.48
16	7.0	32.49
17	6.7	32.54
18	6.5	31.67
19	6.9	32.51
20	6.0	32.42
21	6.0	32.45
22	6.4	32.54
23	6.0	32.42
24	5.8	32.46
25	6.2	32.45
26	5.4	32.47
27	4.8	32.53
28	4.7	32.56
29	4.6	32.38
30	5.2	32.33
31	5.0	33.59
Mean	6.6	32.47

Ambrose Channel Lightship (fig. 8, table 8)

The subnormal air temperatures along the coast of the Middle Atlantic States are reflected in the surface water temperatures which were below average most of the year at this observation post. Low records were set in 14 decades.

Bottom water temperature set low records in 6 decades. Bottom temperatures were subnormal in a majority of the decades.

The salinity minimum came in late April, which is about the normal time. Salinities were above normal in most decades from early April through early November.

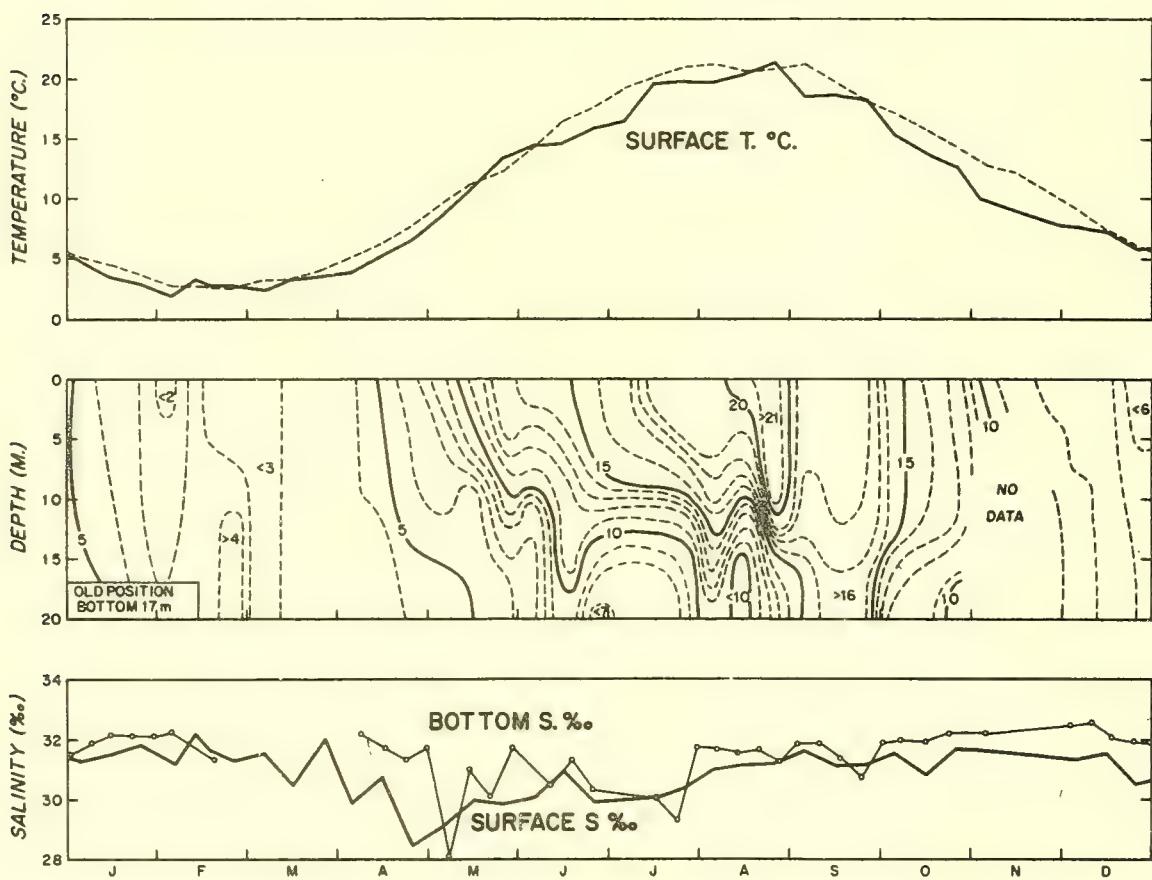


Figure 8.--Ambrose Channel Lightship, 1965. (The dashed line in the upper diagram is the mean for 1956-64.)

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($40^{\circ}25.6' N.$, $73^{\circ}51.5' W.$; water depth: 17 meters)

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	17 m.	0 m.	17 m.
January						
1	6.1	6.1	6.3	6.3	31.54	31.46
2	6.1	6.2	6.3	6.3	31.97	
3	4.7	5.0	5.0	5.0	32.19	
4	3.9	4.2	4.7	4.9	31.96	
5	4.0	4.1	4.4	4.6	31.26	
6	4.3	3.5	4.2	4.9	30.83	
7	4.5	4.7	5.7	5.7	31.11	
8	4.4	-	-	-	31.43	31.87
9	4.6	4.5	5.1	5.1	29.40	
10	4.4	-	-	-	31.09	
11	4.5	4.5	4.5	4.5	32.45	
12	4.4	5.6	5.7	5.6	30.63	
13	4.3	5.1	6.0	6.0	30.60	
14	4.5	4.5	5.7	5.9	31.26	
15	4.6	4.6	5.2	5.2	31.95	32.18
16	-	-	-	-	-	
17	-	-	-	-	-	
18	2.6	3.1	3.2	3.3	32.03	
19	1.0	2.3	3.5	3.9	30.92	
20	2.2	-	-	-	31.98	
21	2.8	2.8	3.0	-	31.47	
22	3.5	3.3	3.9	3.9	32.17	32.17
23	3.5	3.5	-	-	32.28	
24	3.3	-	-	-	-	
25	3.5	3.7	-	-	32.19	
26	3.3	3.4	3.4	3.4	32.09	
27	3.5	3.0	3.4	3.4	31.62	
28	2.9	2.8	3.2	3.2	31.22	
29	2.4	2.5	3.2	3.6	31.12	32.13
30	2.0	2.5	2.7	2.8	31.77	
31	2.2	2.2	2.8	2.9	32.06	
Mean	3.7	3.9	4.4	4.6	31.52	31.96

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($40^{\circ}25.6' N.$, $73^{\circ}51.5' W.$; water depth: 17 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	17 m. 20 m.*	0 m.	17 m. 20 m.*
February						
1	2.2	3.1	3.4	3.5	-	-
2	2.2	3.8	3.9	3.9	31.19	
3	1.8	2.2	4.2	4.2	31.13	
4	3.0	3.0	3.1	3.1	32.59	
5	1.4	2.0	2.1	2.1	31.86	32.21
6	1.6	2.1	2.4	2.5	-	
7	1.5	2.2	2.4	2.4	31.43	
8	1.4	2.3	2.5	2.5	30.78	
9	2.1	2.6	2.6	2.6	30.23	
10	2.2	-	-	-	30.40	
11	2.9	3.1	3.2	(3.2)	31.88	
12	2.8	2.6	-	-	32.46	
13	3.4	3.3	3.5	3.6	32.26	
14	3.5	3.5	-	-	32.40	
15	3.3	-	-	-	32.45	
16	3.3	4.0	4.1	-	31.79	
17*	3.1	4.4	4.7	4.7	31.86	
18	3.3	4.0	4.2	4.2	31.20	
19	4.0	4.5	5.0	5.0	31.30	31.33
20	1.0	1.0	1.2	1.3	32.22	
21	2.8	3.9	4.3	4.3	30.43	
22	3.3	-	-	-	-	
23	3.3	-	-	-	31.32	
24	2.2	-	-	-	31.68	
25	2.2	-	-	-	32.33	
26	2.2	-	-	-	31.89	
27	3.0	3.3	4.3	4.3	31.72	
28	3.2	3.3	4.3	4.5	29.46	
29						
30						
31						
Mean	2.6	3.1	3.4	3.4	31.53	31.77

*Ambrose Channel Lightship moved on 17 February 1965 from $40^{\circ}25.6' N.$, $73^{\circ}51.5' W.$; water depth: 17 meters to $40^{\circ}27.6' N.$, $73^{\circ}50.2' W.$; water depth: 20 meters.

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{\circ}/oo$), 1965 ($40^{\circ}27.6' N.$,
 $73^{\circ}50.2' W.$; water depth: 20 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
March						
1	-	-	-	-	-	
2	2.3	2.3	2.2	2.1	31.98	
3	2.1	2.0	2.2	2.2	31.59	
4	4.4	-	-	-	31.55	
5	-	-	-	-	29.66	
6	2.3	2.3	2.4	2.5	31.75	
7	2.2	2.1	2.2	2.3	32.07	
8	2.0	2.0	2.0	2.1	31.83	
9	2.4	2.1	2.1	2.1	32.07	
10	1.1	-	-	-	31.72	
11	-	-	-	-	-	
12	-	-	-	-	-	
13	2.2	-	-	-	-	
14	4.4	-	-	-	31.62	
15	2.2	-	-	-	29.45	
16	3.9	3.8	3.9	3.9	-	
17	-	-	-	-	30.27	
18	-	-	-	-	-	
19	3.8	3.9	3.9	3.9	-	
20	-	-	-	-	-	
21	-	-	-	-	-	
22	3.3	-	-	-	-	
23	-	-	-	-	-	
24	3.7	3.8	3.9	4.0	-	
25	3.7	3.7	3.8	4.0	-	
26	-	-	-	-	32.02	
27	2.2	-	-	-	-	
28	4.4	-	-	-	-	
29	-	-	-	-	-	
30	3.9	-	-	-	-	
31	3.9	3.9	3.9	4.0	-	
Mean	3.0	(2.9)	(3.0)	(3.0)	(31.35)	

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($40^{\circ} 27.6' N.$,
 $73^{\circ} 50.2' W.$; water depth: 20 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
April						
1	4.2	4.2	3.6	3.8	24.19	
2	3.6	3.6	3.6	3.8	30.29	
3	3.5	3.5	3.5	3.6	31.43	
4	3.6	3.5	3.6	3.7	31.66	
5	4.0	3.9	3.7	3.6	30.82	
6	4.2	4.2	3.7	3.7	29.36	
7	3.6	3.4	3.1	3.2	29.88	
8	3.8	3.4	3.1	3.0	29.50	32.20
9	4.0	4.0	3.9	3.2	31.02	
10	4.1	3.9	3.5	3.2	31.63	
11	5.0	4.3	4.1	3.8	31.84	
12	5.1	4.7	3.3	3.3	29.58	
13	6.0	4.2	4.1	3.1	31.93	
14	3.9	3.8	3.8	3.2	32.20	
15	4.5	4.1	3.3	3.3	31.47	
16	6.1	-	-	-	29.60	31.73
17	5.0	4.3	3.9	(3.9)	30.90	
18	5.3	4.7	4.6	4.6	30.36	
19	4.7	5.0	3.4	3.4	30.30	
20	5.9	5.2	3.8	3.7	29.74	
21	5.1	4.5	3.6	3.5	29.61	
22	5.7	5.1	3.5	-	29.18	
23	6.2	5.8	4.4	-	29.48	31.37
24	6.0	5.8	5.0	4.0	31.15	
25	6.0	5.6	5.2	-	25.03	
26	5.6	-	-	-	27.00	
27	9.8	7.1	6.7	-	25.37	
28	6.2	5.9	4.0	4.0	29.00	
29	7.2	6.5	5.1	4.8	29.35	
30	8.0	6.9	5.3	(5.3)	29.76	31.77
31						
Mean	5.2	4.7	4.0	3.7	29.75	31.77

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{\circ}/oo$), 1965 ($40^{\circ}27.6' N.$,
 $73^{\circ}50.2' W.$; water depth: 20 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
May						
1	7.5	5.9	5.1	5.1	30.25	
2	8.3	-	-	-	28.52	
3	8.9	5.4	5.1	5.1	28.09	
4	8.9	-	-	-	29.14	
5	8.8	5.6	4.8	(4.7)	29.00	
6	8.9	5.0	4.8	(4.8)	28.80	
7	8.6	5.0	4.3	3.9	28.09	28.07
8	8.5	8.5	5.6	4.7	29.13	
9	9.0	8.4	6.0	-	30.41	
10	8.9	-	-	-	29.59	
11	11.7	-	-	-	30.03	
12	10.5	6.3	4.7	(4.1)	30.72	
13	11.0	6.7	6.3	(6.3)	29.67	
14	10.5	6.1	4.6	4.5	31.04	31.00
15	11.1	-	-	-	30.32	
16	10.9	7.3	5.4	5.2	29.78	
17	10.3	4.6	4.4	(4.5)	29.53	
18	11.1	5.9	5.1	5.1	29.92	
19	11.0	5.3	5.0	5.0	29.34	
20	12.2	-	-	-	29.24	
21	12.2	-	-	-	30.16	30.16
22	12.2	-	-	-	30.22	
23	12.2	12.1	7.4	-	28.00	
24	12.2	-	-	-	31.12	
25	13.3	13.0	10.7	-	30.50	
26	13.3	-	-	-	30.55	
27	16.5	14.2	-	-	28.96	
28	14.2	6.6	5.0	-	29.11	31.74
29	14.4	-	-	-	29.26	
30	14.4	-	-	-	29.86	
31	12.9	5.4	4.7	(4.7)	30.25	
Mean	11.1	7.2	5.5	-	29.63	30.24

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($40^{\circ}27.6' N.$,
 $73^{\circ}50.2' W.$; water depth: 20 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
June						
1	13.4	8.6	7.8	(7.7)	30.10	
2	12.6	9.1	7.5	(7.5)	29.60	
3	15.1	11.6	7.4	7.4	30.41	
4	14.7	14.2	6.7	6.6	30.22	
5	14.4	-	-	-	30.25	
6	15.4	13.2	8.0	-	30.19	
7	15.4	10.4	5.0	-	-	
8	14.4	-	-	-	29.19	
9	14.4	5.8	5.1	-	29.70	
10	13.9	7.5	7.2	-	30.72	
11	14.4	-	-	-	30.40	30.43
12	14.6	8.2	7.5	(7.4)	30.81	
13	14.4	-	-	-	31.30	
14	14.4	-	-	-	31.08	
15	14.4	-	-	-	30.74	
16	14.5	6.4	5.8	(5.7)	31.43	
17	14.4	-	-	-	31.46	
18	14.7	14.6	14.3	13.8	31.25	31.26
19	14.5	14.1	13.2	9.6	31.03	
20	15.4	15.9	14.8	9.6	30.29	
21	16.0	15.8	11.5	8.3	29.20	
22	15.0	14.4	11.8	-	29.09	
23	16.5	15.2	10.4	9.6	29.42	
24	15.6	-	-	-	29.78	
25	15.7	12.2	7.5	6.7	30.37	30.38
26	15.6	14.6	7.0	5.9	30.71	
27	15.6	-	-	-	30.20	
28	15.8	14.1	6.9	5.2	30.34	
29	16.6	13.5	6.8	6.2	30.13	
30	16.6	11.0	6.2	5.9	29.98	
31						
Mean	14.9	10.9	8.5	7.7	30.32	30.69

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($40^{\circ} 27.6' N.$,
 $73^{\circ} 50.2' W.$; water depth: 20 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
July						
1	15.6	-	-	-	-	
2	15.6	-	-	-	-	
3	15.6	-	-	-	-	
4	15.6	-	-	-	-	
5	15.6	-	-	-	-	
6	15.6	-	-	-	-	
7	15.6	-	-	-	-	
8	17.8	-	-	-	-	
9	18.3	-	-	-	-	
10	18.3	-	-	-	-	
11	18.3	-	-	-	-	
12	18.3	-	-	-	-	
13	18.3	-	-	-	-	
14	20.0	-	-	-	-	
15	20.0	-	-	-	30.40	
16	20.5	14.5	7.1	6.8	30.12	30.06
17	20.0	13.4	8.5	8.1	29.86	
18	20.0	-	-	-	30.20	
19	20.1	15.2	9.3	8.0	29.58	
20	20.4	17.3	11.6	9.5	30.63	
21	20.0	-	-	-	30.81	
22	18.6	19.4	11.2	(10.1)	29.86	
23	19.2	19.7	12.0	(11.9)	29.36	29.34
24	19.2	13.5	9.4	-	29.84	
25	19.5	15.5	7.9	-	30.38	
26	20.0	-	-	-	30.23	
27	20.5	15.1	8.0	(8.0)	30.81	
28	20.5	12.7	8.4	8.3	31.09	
29	20.1	12.8	8.6	8.0	31.13	
30	19.1	15.5	7.4	7.3	30.42	31.79
31	20.0	18.5	9.9	9.8	30.36	
Mean	18.6	-	-	-	(30.20)	(30.40)

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{\circ}/oo$), 1965 ($40^{\circ}27.6' N.$,
 $73^{\circ}50.2' W.$; water depth: 20 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
August						
1	19.5	20.4	10.1	10.0	30.81	
2	20.0	20.0	20.2	12.7	30.97	
3	20.2	20.0	19.0	(13.0)	31.20	
4	20.3	19.7	14.8	12.0	31.15	
5	20.5	20.4	15.5	12.5	30.44	
6	20.5	19.2	11.7	10.2	30.63	31.63
7	20.5	17.9	11.5	(10.0)	30.59	
8	21.1	15.9	16.4	-	31.43	
9	17.6	11.6	7.3	-	31.13	
10	16.1	11.8	7.1	6.0	31.64	
11	17.7	10.3	7.3	(6.0)	31.18	
12	19.0	9.0	7.0	6.8	31.12	
13	20.0	-	-	-	31.54	31.54
14	19.0	11.0	8.1	7.1	31.50	
15	20.0	11.4	8.3	8.1	31.13	
16	20.0	17.2	8.4	(8.3)	31.00	
17	22.6	22.3	11.3	(11.2)	31.46	
18	21.0	22.2	14.4	11.1	30.50	
19	21.2	19.8	12.2	(11.7)	30.32	
20	23.0	21.1	12.0	(12.0)	31.48	31.63
21	22.4	21.3	13.1	12.9	31.49	
22	22.1	22.0	13.1	(13.0)	31.61	
23	22.2	22.2	16.7	(13.7)	31.56	
24	22.5	22.4	20.2	(13.3)	31.54	
25	23.1	23.0	22.0	(14.5)	31.60	
26	21.2	21.3	16.6	(14.2)	30.48	
27	21.7	22.8	14.8	(14.2)	30.69	31.25
28	21.9	22.8	14.9	(13.8)	30.59	
29	18.9	-	-	-	31.26	
30	19.0	19.0	8.1	7.5	30.78	
31	18.9	18.7	6.3	(6.1)	31.52	
Mean	20.4	18.5	12.7	10.8	31.11	31.51

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($40^{\circ}25.6' N.$,
 $73^{\circ}50.2' W.$; water depth: 20 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
September						
1	18.8	18.3	-	-	31.58	
2	15.6	14.4	10.6	-	31.76	
3	17.4	13.5	10.5	-	31.65	31.83
4	17.8	-	-	-	31.61	
5	19.0	19.0	17.7	(15.0)	31.82	
6	19.5	19.5	19.5	19.5	31.82	
7	19.1	19.0	18.4	16.0	31.82	
8	19.2	19.2	17.4	-	31.72	
9	19.5	19.0	16.8	13.8	31.44	
10	19.0	19.1	16.8	14.0	30.80	31.84
11	19.2	18.9	15.6	14.0	30.75	
12	19.3	19.1	16.8	12.9	30.80	
13	18.0	18.2	18.3	18.3	31.65	
14	17.1	17.1	16.9	16.5	31.92	
15	19.0	18.1	17.1	16.9	30.68	
16	18.5	17.9	17.0	16.9	30.78	
17	18.4	18.4	17.4	17.2	31.14	31.38
18	17.8	-	-	-	31.37	
19	19.2	18.6	18.0	17.3	31.46	
20	19.0	18.2	17.8	17.7	31.06	
21	18.9	-	-	-	31.07	
22	19.8	19.0	18.0	(17.5)	30.65	
23	20.0	18.7	17.1	(15.5)	30.82	
24	20.0	-	-	-	30.71	30.71
25	18.5	18.4	16.7	15.1	31.25	
26	17.2	17.3	16.5	15.5	31.43	
27	16.7	-	-	-	-	
28	17.1	17.1	15.5	13.8	31.63	
29	16.4	17.3	17.3	17.0	31.22	
30	16.8	16.8	16.8	16.7	31.77	
31						
Mean	18.4	18.0	16.7	16.1	31.32	31.44

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{\circ}$ /oo), 1965 ($40^{\circ}27.6' N.$,
 $73^{\circ}50.2' W.$; water depth: 20 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
October						
1	18.2	18.1	18.0	(18.0)	31.78	31.88
2	16.2	16.3	16.4	16.5	31.33	
3	15.8	16.0	16.0	(16.0)	31.56	
4	15.4	15.5	7.1	(6.5)	31.58	
5	14.4	14.6	10.4	(6.3)	31.92	
6	13.7	14.0	13.5	5.2	31.90	
7	16.4	16.3	-	-	31.90	31.98
8	13.8	14.5	10.0	(9.0)	30.78	
9	13.9	15.1	14.4	-	30.88	
10	15.5	16.1	15.7	-	31.17	
11	15.6	16.0	16.0	(14.0)	31.30	
12	15.6	16.0	15.9	-	30.43	
13	13.8	14.9	11.2	-	30.89	
14	13.9	-	-	-	30.53	
15	13.8	13.5	12.5	-	30.86	31.90
16	13.5	13.2	-	-	31.41	
17	12.8	12.5	7.1	-	32.01	
18	12.8	-	-	-	30.10	
19	12.5	-	-	-	30.43	
20	13.3	-	-	-	30.03	
21	13.5	13.7	12.7	-	31.22	
22	13.5	13.8	13.5	(9.2)	32.06	32.20
23	13.5	13.2	12.2	12.0	32.06	
24	13.7	13.6	13.6	-	32.09	
25	13.2	13.2	13.0	(13.0)	32.01	
26	11.8	13.0	10.5	-	30.89	
27	12.2	-	-	-	31.05	
28	12.3	12.9	7.0	(6.6)	30.97	
29	12.2	12.2	10.0	(6.5)	31.80	
30	11.1	-	-	-	32.10	
31	12.2	-	-	-	31.68	
Mean	13.9	14.5	12.6	(10.7)	31.31	31.99

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{\circ}/oo$), 1965 ($40^{\circ}27.6' N.$,
 $73^{\circ}50.2' W.$; water depth: 20 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
November						
1	10	-	-	-	31.81	
2	10	-	-	-	32.13	
3	10	-	-	-	31.48	
4	10	-	-	-	30.66	
5	10	-	-	-	32.00	32.20
6	9.4	-	-	-	-	
7	7.2	-	-	-	-	
8	8.9	-	-	-	-	
9	8.9	-	-	-	-	
10	8.3	-	-	-	-	
11	9.4	-	-	-	-	
12	8.9	-	-	-	-	
13	9.4	-	-	-	-	
14	8.3	-	-	-	-	
15	7.2	-	-	-	-	
16	6.7	-	-	-	-	
17	7.2	-	-	-	-	
18	8.3	-	-	-	-	
19	9.4	-	-	-	-	
20	7.2	-	-	-	-	
21	8.3	-	-	-	-	
22	9.4	-	-	-	-	
23	8.3	-	-	-	-	
24	8.3	-	-	-	-	
25	7.2	-	-	-	-	
26	7.2	-	-	-	-	
27	7.2	-	-	-	-	
28	7.2	-	-	-	-	
29	-					
30	7.8	8.7	9.0	9.0	31.71	
31						
Mean	8.5					

Table 8.--Ambrose Channel Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($40^{\circ} 27.6' N.$,
 $73^{\circ} 50.2' W.$; water depth: 20 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
December						
1	8.0	8.8	9.6	9.7	31.90	
2	6.7	8.3	8.8	9.0	29.50	
3	7.5	8.7	9.3	9.6	30.56	32.45
4	7.9	8.6	9.2	9.2	30.64	
5	7.6	7.9	8.7	8.7	31.07	
6	8.0	8.8	9.2	9.0	30.94	
7	7.7	7.7	7.8	(7.8)	32.02	
8	7.9	8.0	8.1	8.1	32.15	
9	7.9	7.9	8.4	8.6	32.25	
10	7.8	8.0	8.2	8.9	31.66	32.54
11	7.8	7.9	8.7	9.1	31.56	
12	7.5	7.6	7.6	7.6	32.38	
13	8.0	8.0	8.0	8.0	32.34	
14	7.7	7.9	7.8	7.8	32.29	
15	8.0	8.0	7.9	7.8	32.13	
16	6.4	7.3	7.2	7.1	30.22	
17	6.8	7.1	7.3	7.3	30.82	32.07
18	7.5	7.7	7.9	7.9	32.03	
19	6.4	7.4	7.8	7.8	30.05	
20	6.4	6.5	7.3	7.7	31.26	
21	6.3	6.7	7.1	7.5	32.00	
22	6.1	6.8	7.1	7.5	31.10	
23	5.3	5.9	7.0	7.0	29.66	
24	6.0	6.7	7.6	7.7	30.17	31.95
25	6.3	7.2	7.5	(7.5)	-	
26	6.4	6.5	6.6	6.6	32.07	
27	6.8	6.9	6.9	6.9	32.35	
28	5.9	6.6	6.9	6.8	31.33	
29	4.4	5.4	6.1	6.1	29.35	
30	4.5	5.3	6.4	6.4	28.73	
31	5.0	5.5	6.5	6.5	28.68	31.90
Mean	6.9	7.3	7.8	7.8	31.11	32.18

Barnegat Lightship (fig. 9, table 9)

Surface water temperatures were below normal in about two-thirds of the decades reported and four record lows were observed.

Bottom temperature showed 10 record lows and most of the decades from mid-April through December were colder than normal.

The lowest surface salinity observed was in early June but the data for parts of April and May are missing. The average time of the minimum is in mid-May. Surface salinities were generally below average in the first quarter and above average during the remainder of the year. The water column was apparently more nearly isohaline than is usual during the period of the summer thermocline along this section of the coast.

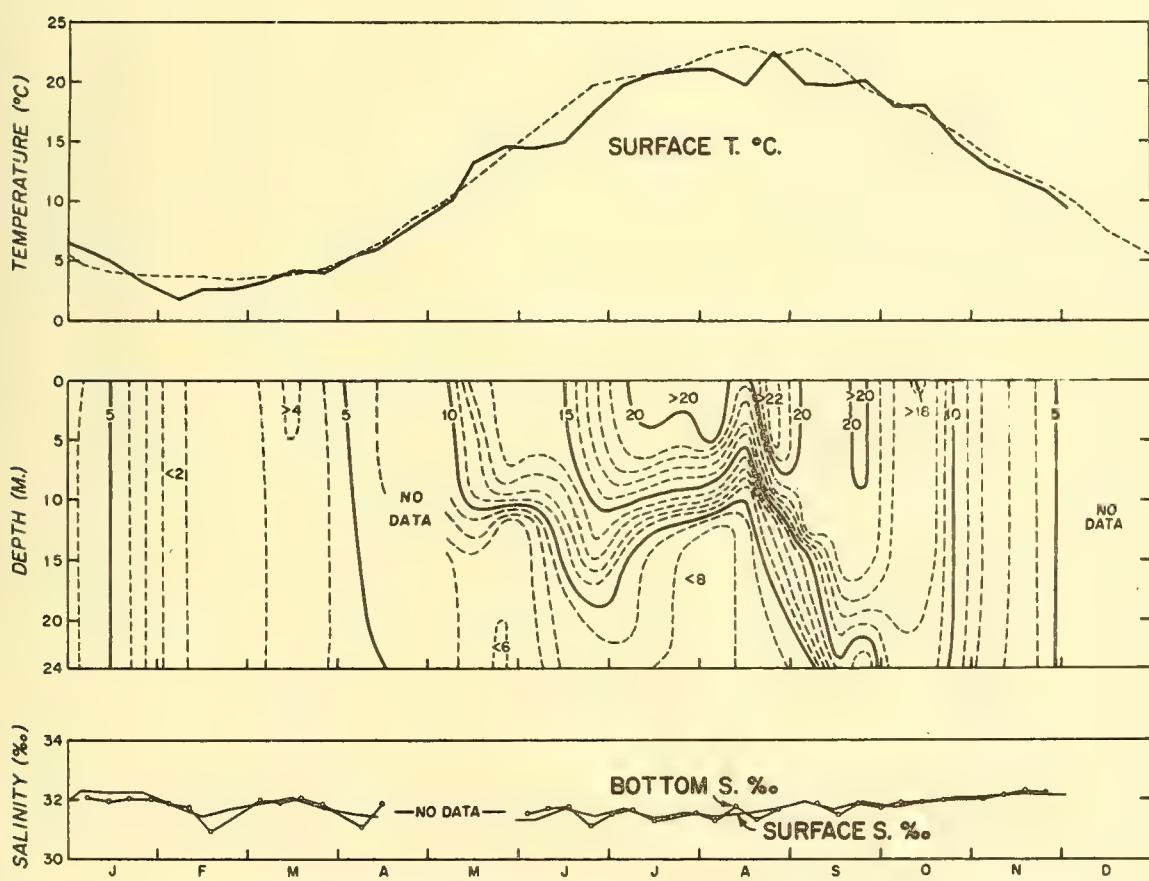


Figure 9.--Barnegat Lightship, 1965. (The dashed line in the upper diagram is the mean for 1956-64.)

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($39^{\circ}45.8' N.$, $73^{\circ}56.0' W.$; water depth: 24 meters)

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
January						
1	6.6	6.6	6.5	(6.5)	32.04	
2	6.7	6.6	6.6	(6.6)	33.17	
3	6.7	6.3	6.3	6.3	32.40	
4	6.1	6.0	6.0	-	32.40	
5	6.2	6.1	-	-	32.32	
6	5.5	5.2	5.3	-	33.08	
7	5.5	5.2	5.1	-	32.06	32.06
8	5.6	-	-	-	31.99	
9	5.1	5.1	5.3	5.8	31.82	
10	5.6	-	-	-	32.37	
11	6.0	6.0	6.0	6.0	32.37	
12	6.1	-	-	-	32.51	
13	5.1	5.4	5.7	5.7	31.99	
14	5.0	5.0	-	-	31.96	31.95
15	5.0	-	-	-	31.97	
16	-	-	-	-	-	
17	-	-	-	-	-	
18	4.7	4.8	5.0	(5.0)	32.36	
19	4.5	4.5	4.5	-	32.35	
20	4.0	3.8	3.8	-	32.20	
21	3.3	3.1	(3.1)	-	32.04	32.04
22	2.8	2.7	2.8	-	31.89	
23	2.8	-	-	-	32.49	
24	4.0	4.0	4.0	-	32.57	
25	4.3	4.1	(4.1)	-	32.35	
26	4.2	4.2	-	-	32.34	
27	4.4	-	-	-	32.31	
28	3.5	3.5	3.4	-	32.05	32.04
29	3.1	3.1	3.1	(3.1)	32.10	
30	1.7	-	-	-	32.08	
31	1.1	-	-	-	32.10	
Mean	4.7	4.8	4.8	(5.6)	32.26	32.02

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($39^{\circ}45.8' N.$, $73^{\circ}56.0' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
February						
1	-	-	-	-	-	
2	-	-	-	-	-	
3	-	-	-	-	-	
4	1.7	-	-	-	31.88	31.83
5	1.8	1.7	1.7	1.7	31.87	
6	1.7	1.5	-	-	31.76	
7	2.1	1.9	1.9	1.9	31.76	
8	2.2	1.8	-	-	31.74	
9	2.4	2.3	2.3	-	31.73	
10	1.7	-	-	-	31.73	
11	2.3	2.1	2.1	-	31.73	31.77
12	2.3	2.3	2.1	-	31.79	
13	2.6	2.4	-	-	31.56	
14	2.3	2.3	-	-	31.64	
15	2.7	2.7	-	-	31.92	
16	2.8	2.7	-	-	30.97	
17	2.9	2.4	-	-	30.78	
18	3.1	2.5	-	-	30.93	30.96
19	2.5	2.4	-	-	31.09	
20	2.7	2.7	(2.6)	-	31.83	
21	2.5	2.5	-	-	31.86	
22	2.8	-	-	-	31.58	
23	2.4	-	-	-	31.74	
24	2.2	-	-	-	31.67	
25	2.8	-	-	-	31.73	
26	2.2	-	-	-	31.67	
27	2.8	-	-	-	31.80	
28	2.8	2.4	2.4	-	31.79	
29						
30						
31						
Mean	2.4	(2.3)	-	-	31.62	31.52

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($39^{\circ}45.8'$ N., $73^{\circ}56.0'$ W.; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
March						
1	2.9	2.4	-	-	31.91	
2	2.4	-	-	-	32.03	
3	3.3	-	-	-	31.91	
4	3.5	2.8	2.5	-	32.04	31.99
5	3.3	-	-	-	31.62	
6	2.8	2.5	2.5	-	31.63	
7	3.2	3.2	3.2	-	32.01	
8	3.9	3.4	3.3	-	31.99	
9	3.5	3.4	3.3	-	31.80	
10	3.5	3.5	3.2	-	31.76	
11	3.6	3.6	-	-	31.85	31.86
12	3.9	3.8	3.8	-	32.12	
13	4.5	4.0	4.0	(4.0)	32.23	
14	4.0	3.8	3.8	3.7	31.60	
15	4.0	3.9	3.6	3.7	31.87	
16	4.2	4.0	3.9	-	32.08	
17	4.4	4.0	4.0	-	32.04	
18	4.4	-	-	-	32.02	32.03
19	4.2	4.2	(4.2)	-	32.27	
20	4.0	4.0	4.0	-	32.23	
21	3.7	3.7	3.7	-	32.08	
22	3.9	3.8	3.8	-	31.98	
23	3.5	3.5	3.5	-	31.62	
24	3.8	3.7	3.6	(3.6)	31.60	31.82
25	3.9	3.9	3.9	-	31.71	
26	3.8	-	-	-	31.46	
27	4.0	4.0	(4.0)	-	31.68	
28	4.3	4.0	4.0	-	31.71	
29	4.2	4.2	-	-	31.59	
30	4.4	4.1	-	-	31.98	
31	4.3	4.1	-	-	31.87	
Mean	3.8	3.7	3.6	-	31.88	31.92

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($39^{\circ}45.8' N.$, $73^{\circ}56.0' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
April						
1	4.8	-	-	-	31.80	
2	3.2	-	-	-	31.77	
3	4.0	-	-	-	31.54	
4	6.0	-	-	-	31.34	
5	6.5	5.5	5.2	5.3	31.20	
6	6.5	5.6	(5.3)	-	31.33	
7	6.4	5.9	5.4	5.3	31.55	
8	5.3	-	-	-	31.04	31.02
9	4.9	4.9	4.6	4.2	31.75	
10	5.6	5.3	4.9	4.5	32.15	
11	6.1	5.4	5.2	4.4	32.04	
12	6.3	5.9	5.1	4.9	30.90	
13	6.1	6.1	5.7	(4.6)	31.12	
14	5.5	5.2	5.1	5.0	31.73	
15	6.2	5.7	5.2	5.0	-	31.86
16	-	-	-	-	-	
17	-	-	-	-	-	
18	-	-	-	-	-	
19	-	-	-	-	-	
20	-	-	-	-	-	
21	-	-	-	-	-	
22	-	-	-	-	-	
23	-	-	-	-	-	
24	-	-	-	-	-	
25	-	-	-	-	-	
26	-	-	-	-	-	
27	-	-	-	-	-	
28	-	-	-	-	-	
29	-	-	-	-	-	
30	-	-	-	-	-	
31	-	-	-	-	-	
Mean	-	-	-	-	(31.52)	(31.44)

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/co$), 1965 ($39^{\circ}45.8' N.$, $73^{\circ}56.0' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
May						
1	-	-	-	-	-	
2	-	-	-	-	-	
3	-	-	-	-	-	
4	-	-	-	-	-	
5	-	-	-	-	-	
6	10.8	9.1	6.1	5.9	-	
7	9.8	9.4	6.0	5.9	-	
8	9.6	9.5	6.0	6.0	-	
9	10.6	-	-	-	-	
10	10.0	-	-	-	-	
11	11.5	9.7	6.0	6.0	-	
12	12.9	9.5	6.0	(6.0)	-	
13	13.1	9.0	6.0	6.0	-	
14	13.3	-	-	-	-	
15	13.2	13.0	8.1	7.0	-	
16	14.0	13.3	7.0	7.0	-	
17	14.4	-	-	-	-	
18	13.9	-	-	-	-	
19	14.0	10.9	7.1	7.1	-	
20	13.1	12.1	7.1	7.1	-	
21	13.0	12.5	6.0	6.0	-	
22	12.9	12.9	6.0	6.0	-	
23	13.9	-	-	-	-	
24	13.3	-	-	-	-	
25	13.6	11.9	6.1	5.4	-	
26	12.8	12.2	4.5	(4.4)	-	
27	14.5	9.8	4.3	4.0	-	
28	18.1	12.5	8.6	8.8	-	
29	16.0	15.3	6.7	-	31.24	
30	15.5	12.1	6.6	6.6	31.36	
31	15.6	15.0	6.7	(6.7)	31.43	
Mean	13.2	11.6	6.4	6.2	-	

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($39^{\circ}45.8'$ N., $73^{\circ}56.0'$ W.; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	3 m.	15 m.	25 m.	0 m.	24 m.
June						
1	15.0	15.3	17.0	-	31.56	
2	16.0	16.3	17.0	-	31.50	
3	15.9	-	-	-	31.49	31.51
4	15.4	15.1	16.0	-	31.43	
5	13.7	13.7	14.0	14.0	31.46	
6	20.6	-	-	-	31.49	
7	16.0	-	-	-	31.41	
8	15.7	15.4	16.1	16.1	31.43	
9	15.8	-	-	-	31.46	
10	16.0	16.7	17.0	17.0	31.51	31.72
11	16.1	-	-	-	31.47	
12	16.7	16.4	17.0	17.0	31.46	
13	15.6	15.2	15.8	15.8	31.49	
14	15.0	14.8	15.4	15.4	31.48	
15	15.1	15.4	15.8	15.8	31.47	
16	16.6	-	-	-	31.46	
17	15.1	15.7	16.0	16.0	31.41	31.75
18	16.0	16.0	16.3	16.3	31.41	
19	15.3	15.8	16.0	16.0	31.45	
20	16.0	16.2	16.5	16.5	31.43	
21	16.1	-	-	-	31.46	
22	15.0	-	-	-	31.45	
23	15.9	15.6	16.0	16.0	31.47	
24	16.1	-	-	-	31.45	31.46
25	16.8	16.0	17.0	17.0	31.45	
26	17.8	16.8	17.0	17.0	31.47	
27	16.2	15.8	16.0	16.0	31.45	
28	15.3	-	-	-	31.45	
29	15.0	15.8	16.0	16.0	31.45	
30	16.7	16.8	17.0	17.0	31.47	
31	-	-	-	-	-	-
None	15.8	15.8	16.5	16.5	31.49	31.56

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($39^{\circ}45.8' N.$, $73^{\circ}56.0' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
July						
1	19.0	18.7	13.8	8.4	31.64	31.54
2	20.0	19.1	13.5	8.4	31.78	
3	19.4	18.2	12.8	8.2	31.84	
4	19.5	18.8	9.2	8.3	31.86	
5	19.7	18.6	8.4	8.4	31.86	
6	20.5	18.8	9.2	8.7	31.82	
7	20.8	19.7	8.9	8.7	31.73	
8	18.9	15.7	8.6	8.0	31.64	31.64
9	20.0	9.8	8.9	8.8	31.35	
10	19.0	10.6	9.8	9.7	31.46	
11	18.9	11.0	9.3	8.9	31.36	
12	19.9	12.2	8.2	7.6	31.32	
13	19.8	14.8	8.8	7.6	31.26	
14	20.4	15.5	8.4	7.4	31.24	
15	21.5	15.6	8.3	8.3	31.26	31.25
16	21.1	19.4	8.2	8.0	31.45	
17	21.8	18.0	8.3	8.0	31.50	
18	21.9	18.5	8.3	7.9	31.46	
19	21.4	12.2	7.9	7.8	31.49	
20	20.6	19.7	7.6	7.5	31.60	
21	20.9	20.0	7.6	7.5	31.62	
22	21.0	20.3	7.7	(7.6)	31.70	
23	21.1	20.4	8.2	(7.9)	31.37	
24	21.7	19.0	8.0	7.9	31.66	
25	21.1	12.2	8.1	8.0	31.48	
26	20.9	11.1	7.9	7.9	31.52	
27	21.1	10.6	8.6	8.6	31.57	
28	20.6	11.5	8.7	8.5	31.56	
29	20.1	7.9	7.6	-	31.54	31.54
30	20.3	14.1	7.7	-	31.60	
31	20.6	17.6	6.8	-	31.65	
Mean	20.4	15.8	8.8	8.2	31.55	31.49

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($39^{\circ}45.8' N.$, $73^{\circ}56.0' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
August						
1	21.0	19.8	1.3	-	31.64	
2	19.0	16.0	5.7	6.7	31.76	
3	20.0	18.8	5.6	7.5	31.43	
4	20.0	18.0	5.7	-	31.30	
5	21.0	19.8	5.5	7.5	31.52	31.30
6	20.5	16.7	5.9	(6.0)	31.23	
7	21.1	18.0	5.5	(6.2)	31.31	
8	21.4	19.3	5.1	(7.0)	31.16	
9	21.6	17.8	5.0	(7.0)	31.57	
10	21.4	16.7	10.0	-	31.43	
11	21.5	17.1	11.0	11.0	31.30	
12	18.0	15.8	5.0	9.0	31.75	31.76
13	20.0	18.7	12.0	13.0	31.56	
14	17.8	15.2	5.2	(6.0)	31.51	
15	17.7	15.0	5.8	6.8	31.58	
16	19.4	17.3	7.0	7.0	31.46	
17	20.5	18.7	7.0	7.0	31.25	
18	20.0	-	-	-	31.58	
19	20.0	19.8	6.0	6.0	31.40	31.30
20	20.4	18.7	7.7	7.7	31.46	
21	23.1	21.8	8.0	(7.5)	31.51	
22	22.5	21.1	7.5	(7.5)	31.56	
23	21.9	19.0	7.5	(7.5)	31.39	
24	23.0	21.8	8.2	7.8	31.57	
25	21.5	20.2	8.2	(8.0)	31.57	
26	22.9	19.9	9.1	(9.5)	31.43	31.63
27	23.1	20.5	8.7	(8.5)	31.57	
28	22.7	19.6	8.4	-	31.57	
29	22.1	19.0	20.7	(11.0)	31.67	
30	20.4	18.2	20.7	(11.0)	31.15	
31	19.9	15.7	19.1	(10.0)	31.64	
Mean	21.0	18.2	9.3	8.1	31.50	31.50

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($39^{\circ}45.8' N.$, $73^{\circ}56.0' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
September						
1	20.0	20.0	8.7	8.3	31.83	
2	20.0	19.6	9.3	8.8	31.90	
3	19.5	19.2	9.2	9.0	31.96	
4	19.7	19.6	12.4	9.3	32.09	
5	18.7	18.7	14.5	8.4	31.99	
6	18.7	18.6	14.9	(9.8)	32.03	
7	19.4	18.7	16.6	9.9	32.00	
8	20.7	20.2	19.5	(11.0)	31.98	
9	20.6	20.4	19.3	(11.0)	31.82	31.84
10	20.4	20.0	18.3	(11.0)	31.83	
11	21.0	20.7	20.7	(10.0)	31.67	
12	20.0	20.0	18.9	-	31.78	
13	19.2	19.2	19.2	14.4	31.77	
14	18.6	18.4	18.3	18.1	31.70	
15	18.3	18.2	18.0	(15.1)	31.67	
16	19.0	18.4	18.3	(13.9)	31.55	31.47
17	19.4	19.4	19.4	15.1	31.65	
18	19.8	19.4	19.3	15.3	31.64	
19	20.2	19.5	19.4	-	31.57	
20	20.0	19.9	18.8	16.7	31.59	
21	20.6	20.4	19.8	-	31.59	
22	21.1	20.8	20.0	9.8	31.54	
23	21.1	-	-	-	31.74	31.86
24	21.1	21.0	19.2	14.1	31.59	
25	20.0	20.3	19.7	14.0	31.61	
26	18.3	-	-	-	31.62	
27	20.2	20.1	20.0	14.1	31.64	
28	18.9	19.0	19.0	14.9	31.70	
29	19.4	19.3	19.3	15.0	31.71	
30	19.1	19.1	-	-	31.69	31.69
31						
Mean	19.8	19.6	17.4	12.4	31.75	31.72

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($39^{\circ}45.8' N.$, $73^{\circ}56.0' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
October						
1	18.9	18.8	18.7	-	-	
2	18.3	-	-	-	31.91	
3	18.3	10.6	18.5	(18.3)	31.78	
4	18.3	-	-	-	31.83	
5	17.1	17.0	17.0	17.0	31.93	
6	17.1	16.9	16.8	16.3	-	
7	16.5	16.9	16.3	15.7	-	31.87
8	16.6	16.5	16.4	16.1	31.86	
9	18.7	18.5	18.4	17.3	31.89	
10	18.6	18.4	18.3	16.9	31.12	
11	18.6	18.5	18.4	16.8	-	
12	18.2	18.0	17.9	17.0	31.97	
13	21.1	17.8	17.7	17.0	32.01	
14	17.6	17.5	17.4	(16.9)	31.92	31.92
15	17.5	17.4	17.4	(16.9)	31.94	
16	17.7	17.5	17.3	(15.4)	31.93	
17	17.2	17.1	17.1	16.7	32.04	
18	17.3	17.0	17.0	17.0	31.98	
19	17.0	16.9	16.8	16.2	31.98	
20	17.7	16.2	16.7	(15.7)	31.98	
21	15.8	15.7	15.4	14.0	32.05	31.89
22	15.7	15.5	15.1	(14.2)	32.00	
23	15.6	15.3	15.4	14.1	31.97	
24	15.6	15.1	15.2	14.4	31.98	
25	15.0	15.0	15.0	-	32.15	
26	14.9	14.7	-	-	32.05	
27	14.9	14.8	14.8	(14.8)	32.01	
28	14.4	14.4	14.4	14.4	32.03	
29	14.4	-	-	-	32.05	
30	13.8	13.8	13.7	13.7	32.07	
31	13.6	13.7	13.6	-	32.03	
Mean	16.9	16.6	16.6	16.0	31.94	31.93

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($39^{\circ}45.8' N.$, $73^{\circ}56.0' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
November						
1	13.8	13.6	13.6	-	31.98	
2	13.3	13.2	13.2	-	31.97	
3	12.8	-	-	-	31.93	
4	13.1	13.0	13.0	13.0	32.01	32.00
5	12.8	-	-	-	32.03	
6	12.8	12.6	12.5	12.0	32.02	
7	12.5	12.5	12.5	12.2	32.07	
8	12.5	12.5	12.5	(12.5)	32.08	
9	11.8	11.9	11.9	11.9	32.12	
10	12.4	12.3	12.3	12.3	32.11	
11	12.2	-	-	-	32.12	32.14
12	12.2	12.2	12.2	12.2	32.30	
13	12.2	-	-	-	32.09	
14	12.1	12.1	12.1	12.1	32.17	
15	12.2	-	-	-	32.09	
16	12.1	12.0	12.0	12.0	32.27	
17	12.2	-	-	-	32.13	
18	11.2	11.1	11.1	11.1	32.24	32.27
19	11.2	11.1	11.0	11.0	32.18	
20	11.3	11.3	11.3	11.3	32.20	
21	11.1	11.1	11.0	11.0	32.28	
22	11.1	-	-	-	32.22	
23	11.2	11.1	11.1	11.1	32.24	
24	11.1	11.0	11.0	(11.0)	32.20	
25	11.1	11.0	11.0	(11.0)	32.19	32.20
26	11.1	11.0	11.0	(11.0)	32.22	
27	10.9	10.9	10.9	10.9	32.17	
28	10.7	10.7	10.7	(10.7)	32.16	
29	10.0	10.0	10.0	10.1	32.05	
30	10.0	10.0	10.0	-	32.06	
31						
Mean	11.8	11.7	12.8	11.5	32.13	32.15

Table 9.--Barnegat Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($39^{\circ}45.8' N.$, $73^{\circ}56.0' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
December						
1	9.5	9.4	9.3	(9.3)	32.12	
2	9.3	9.2	-	-	32.13	
3	9.2	9.1	9.1	-	32.14	
4	-	-	-	-	-	
5	-	-	-	-	-	
6	-	-	-	-	-	
7	-	-	-	-	-	
8	-	-	-	-	-	
9	-	-	-	-	-	
10	-	-	-	-	-	
11	-	-	-	-	-	
12	-	-	-	-	-	
13	-	-	-	-	-	
14	-	-	-	-	-	
15	-	-	-	-	-	
16	-	-	-	-	-	
17	-	-	-	-	-	
18	-	-	-	-	-	
19	-	-	-	-	-	
20	-	-	-	-	-	
21	-	-	-	-	-	
22	-	-	-	-	-	
23	-	-	-	-	-	
24	-	-	-	-	-	
25	-	-	-	-	-	
26	-	-	-	-	-	
27	-	-	-	-	-	
28	-	-	-	-	-	
29	-	-	-	-	-	
30	-	-	-	-	-	
31	-	-	-	-	-	
Mean	-	-	-	-	-	

Five Fathom Bank Lightship (fig. 10, table 10)

It was a cold year at Five Fathom Bank Lightship also. Water temperatures were below normal in about two-thirds of the decades at both surface and bottom. There were record lows in 12 decades at each level.

The minimum in surface salinity came in early June, the normal time. As at Barnegat Lightship salinities were below normal during most of the first 3 months but were predominantly above normal during the rest of the year.

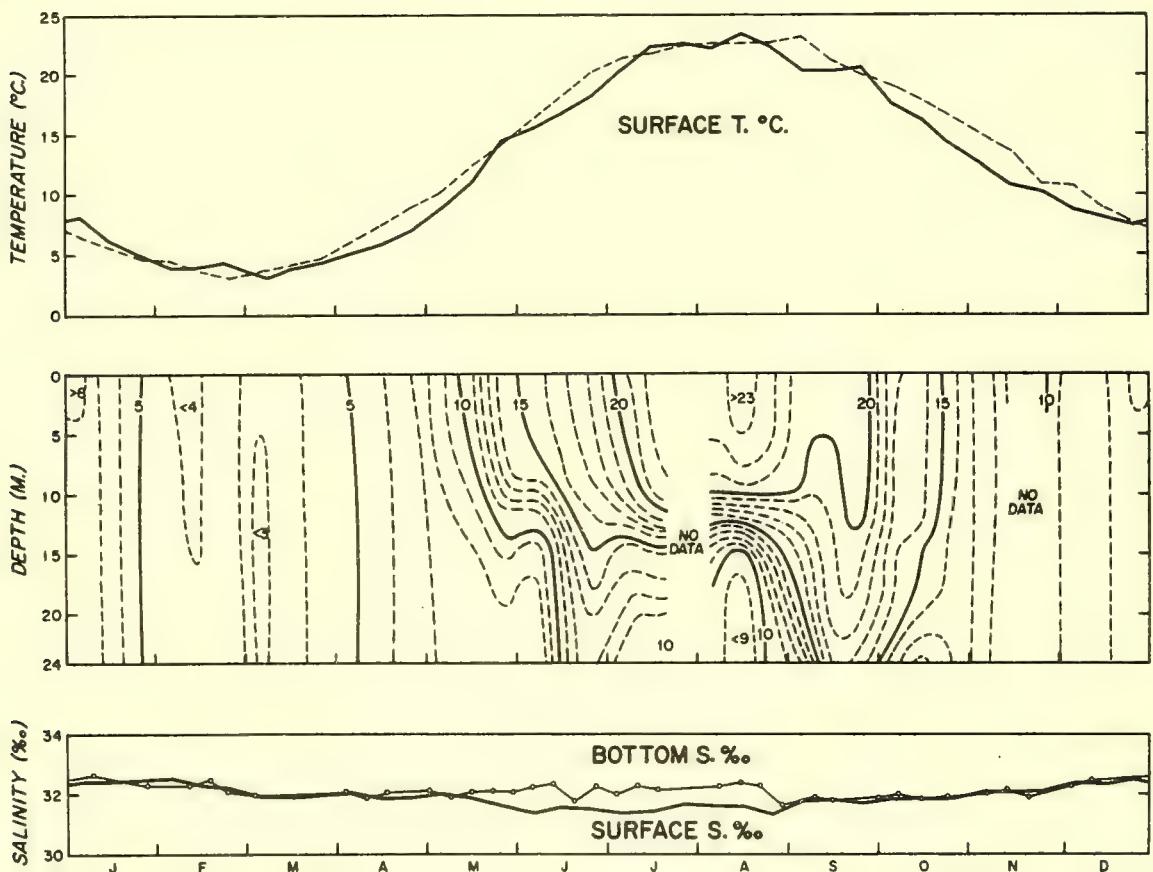


Figure 10.--Five Fathom Bank Lightship, 1965. (The dashed line in the upper diagram is the mean for 1956-64.)

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($38^{\circ}47.3' N.$,
 $74^{\circ}34.6' W.$; water depth: 24 meters)

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
January						
1	8.9	-	-	-	-	
2	8.9	-	-	-	-	
3	8.9	-	-	-	-	
4	8.3	-	-	-	-	
5	6.9	7.5	7.5	(7.5)	32.43	
6	7.3	7.4	7.5	-	32.54	
7	7.9	7.9	-	-	32.71	
8	8.2	8.2	8.0	-	32.67	
9	8.0	8.0	8.1	-	32.15	32.66
10	7.5	7.9	7.5	-	32.22	
11	6.8	6.8	6.8	-	32.45	
12	6.7	6.7	6.7	-	32.57	
13	6.0	7.1	7.5	-	32.19	
14	-	-	-	-	-	
15	6.5	6.5	6.5	-	32.50	
16	-	-	-	-	-	
17	-	-	-	-	-	
18	6.1	-	-	-	32.38	
19	-	-	-	-	-	
20	-	-	-	-	-	
21	-	-	-	-	-	
22	6.7	6.1	6.3	6.3	32.70	
23	6.1	6.1	6.1	6.1	32.67	
24	5.5	5.1	5.1	5.1	32.47	
25	5.5	5.3	5.5	5.5	32.48	
26	6.0	5.6	5.6	5.5	32.51	
27	5.2	5.0	4.9	4.9	32.38	32.31
28	-	-	-	-	-	
29	3.6	1.9	4.0	4.0	32.28	
30	2.5	2.0	2.0	2.9	32.35	
31	3.7	4.0	4.0	4.6	32.59	
Mean	6.6	6.2	6.2	-	32.46	32.48

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($38^{\circ}47.3'$ N.,
 $74^{\circ}34.6'$ W.; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
February						
1	4.1	4.1	4.1	4.1	32.59	
2	-	-	-	-	-	
3	-	-	-	-	-	
4	-	-	-	-	-	
5	3.9	-	-	-	-	
6	-	-	-	-	-	
7	-	-	-	-	-	
8	-	-	-	-	-	
9	-	-	-	-	-	
10	4.1	4.1	4.1	4.1	32.59	
11	3.2	2.8	3.0	3.1	32.14	32.32
12	3.3	-	-	-	32.33	
13	2.5	2.4	2.6	3.0	32.05	
14	3.3	3.1	3.1	3.1	32.34	
15	3.0	2.9	2.9	2.9	32.31	
16	5.2	5.1	5.1	5.0	32.40	
17	5.3	5.3	5.4	5.6	32.40	32.48
18	5.2	5.2	5.2	5.3	32.43	
19	-	-	-	-	-	
20	5.0	5.1	5.1	5.0	32.50	
21	3.2	3.1	3.1	3.1	32.45	
22	3.3	3.4	3.4	3.3	32.50	
23	3.9	-	-	-	32.28	
24	5.0	5.0	4.9	5.8	32.14	32.13
25	-	-	-	-	-	
26	-	-	-	-	-	
27	-	-	-	-	-	
28	6.0	5.6	5.5	5.6	31.82	
29						
30						
31						
Mean	(4.1)	(4.1)	(4.1)	(4.2)	32.33	32.31

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($38^{\circ}47.3' N.$,
 $74^{\circ}34.6' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
March						
1	2.2	2.3	2.1	2.1	31.84	
2	4.4	3.8	3.7	3.8	31.87	
3	2.1	2.1	2.1	2.1	31.79	32.00
4	4.9	4.0	4.0	4.0	31.93	
5	2.7	2.5	2.5	2.5	31.97	
6	2.2	2.2	2.1	2.1	31.67	
7	2.8	2.8	2.9	3.0	31.30	
8	3.3	3.2	3.2	3.2	32.16	
9	3.2	3.0	3.2	3.6	32.79	
10	3.3	3.3	3.2	3.3	31.85	
11	-	-	-	-	-	
12	3.0	3.0	3.0	3.2	31.80	
13	3.0	3.0	3.0	3.0	31.86	
14	3.8	3.8	3.8	3.8	31.80	
15	4.0	4.0	4.0	4.0	31.91	
16	3.9	-	-	-	32.07	
17	4.4	4.0	4.0	4.0	32.09	
18	4.0	4.0	4.0	4.0	32.08	
19	4.4	4.2	4.2	4.2	31.97	
20	-	-	-	-	32.04	
21	3.0	3.0	3.0	3.0	32.24	
22	4.0	3.9	4.0	4.0	32.05	
23	-	-	-	-	-	
24	4.3	4.2	4.2	4.3	31.59	
25	4.4	4.2	4.3	4.3	32.07	
26	4.3	4.3	4.2	4.2	32.00	
27	4.7	4.9	4.3	4.3	32.03	
28	4.5	4.5	4.5	4.5	31.98	
29	4.9	4.8	4.6	4.5	31.87	
30	-	-	-	-	-	
31	4.4	4.7	4.6	4.6	32.10	
Mean	3.7	3.6	3.6	3.6	31.97	

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{\circ}/oo$), 1965 ($38^{\circ}47.3' N.$,
 $74^{\circ}34.6' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
April						
1	5.0	4.7	4.7	4.8	32.08	
2	4.7	4.9	4.9	4.9	32.11	
3	4.6	4.7	4.6	4.6	32.14	32.13
4	4.7	4.6	4.5	4.5	31.95	
5	5.0	4.7	4.7	4.7	32.25	
6	5.5	5.0	4.9	4.9	32.00	
7	5.4	5.0	4.8	4.8	32.08	
8	5.5	4.8	4.8	4.8	32.14	
9	-	-	-	-	-	
10	5.2	4.9	4.9	4.9	31.84	31.93
11	5.5	4.9	4.8	4.8	31.83	
12	6.1	-	-	-	31.83	
13	5.4	5.3	5.2	5.1	31.86	
14	5.6	5.5	5.5	5.4	31.87	
15	5.4	5.3	5.3	5.3	31.83	
16	6.0	5.6	5.6	5.6	31.89	
17	6.1	5.9	5.9	5.8	32.00	32.05
18	6.4	5.9	5.9	5.9	32.20	
19	6.1	6.1	6.1	6.1	32.04	
20	6.0	6.0	6.0	6.0	31.95	
21	6.7	5.9	5.9	5.9	31.96	
22	6.4	6.0	5.8	5.8	31.99	
23	7.5	6.6	6.2	-	31.91	
24	-	-	-	-	-	
25	6.8	6.7	6.6	6.6	32.05	
26	-	-	-	-	-	
27	6.9	6.8	6.7	6.6	32.01	
28	7.0	6.9	6.8	6.8	31.90	
29	7.2	6.7	6.9	6.9	32.00	
30	7.1	6.7	6.6	6.6	32.03	
31						
Mean	5.9	5.6	5.6	5.5	31.99	32.04

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($38^{\circ}47.3' N.$,
 $74^{\circ}34.6' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
May						
1	8.3	7.3	6.6	6.3	31.90	32.18
2	9.0	7.3	6.6	6.6	31.99	
3	8.5	7.0	6.6	6.5	32.09	
4	9.4	-	-	-	32.06	
5	8.9	8.5	6.9	6.6	32.08	
6	8.8	7.9	7.2	7.0	31.96	
7	8.9	-	-	-	32.06	
8	8.9	8.9	8.9	8.1	31.99	31.94
9	9.0	8.9	8.9	8.8	32.11	
10	8.9	-	-	-	32.24	
11	9.4	7.2	7.0	5.2	31.63	
12	10.8	9.0	8.0	7.0	31.97	
13	10.5	10.0	7.9	7.1	32.02	
14	8.9	8.8	8.4	6.3	32.04	
15	11.1	10.7	10.4	7.8	31.97	32.10
16	11.5	9.5	7.2	7.2	32.04	
17	9.6	8.3	5.4	5.0	31.98	
18	12.1	10.9	7.1	7.0	31.79	
19	11.7	10.3	7.3	7.1	31.93	
20	13.5	8.6	7.8	7.5	31.85	
21	13.3	11.9	11.4	11.4	31.98	
22	11.1	10.1	5.9	5.8	31.98	32.14
23	13.8	11.1	7.3	7.0	31.49	
24	14.0	10.9	8.3	7.3	31.55	
25	13.8	12.4	8.9	7.8	32.02	
26	15.0	13.2	9.0	7.3	31.77	
27	15.7	13.7	9.1	7.1	31.28	
28	15.4	14.2	9.4	7.1	31.23	
29	15.6	-	-	-	31.48	32.13
30	14.7	14.2	9.7	7.4	31.48	
31	15.6	14.8	11.4	8.0	31.45	
Mean	11.5	10.2	8.1	7.2	31.85	32.10

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oc$), 1965 ($38^{\circ}47.3'$ N.,
 $74^{\circ}34.6'$ W.; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
June						
1	15.4	13.2	7.7	7.2	31.78	
2	14.9	13.3	7.7	7.0	31.34	
3	-	-	-	-	-	
4	13.6	11.6	8.7	8.2	31.66	
5	13.9	-	-	-	31.67	32.24
6	15.6	14.1	8.4	7.3	31.30	
7	15.7	13.1	8.3	7.0	31.28	
8	17.0	15.3	9.4	7.1	31.03	
9	16.7	12.8	8.3	7.1	31.22	
10	16.7	16.2	8.4	7.3	31.36	
11	17.0	15.6	9.1	7.4	31.34	
12	17.7	16.9	9.9	7.6	31.40	32.39
13	17.8	16.4	7.6	7.1	31.45	
14	17.6	16.7	8.2	(7.6)	31.46	
15	-	-	-	-	-	
16	-	-	-	-	-	
17	-	-	-	-	-	
18	15.4	15.1	14.9	14.9	31.90	
19	15.6	15.0	14.7	14.5	31.84	31.80
20	15.6	15.1	14.7	14.5	31.83	
21	16.7	15.4	14.7	14.7	31.57	
22	16.8	16.1	15.1	14.0	31.59	
23	17.8	16.3	15.3	12.7	31.55	
24	17.6	16.9	15.6	11.7	31.41	
25	17.5	17.2	12.3	11.8	31.56	
26	18.3	17.2	15.4	10.1	31.59	32.24
27	18.6	18.2	15.1	13.9	31.60	
28	19.2	18.6	16.0	13.0	31.59	
29	19.1	15.1	12.2	11.0	31.67	
30	20.1	19.0	15.5	9.3	31.38	
31						
Mean	16.8	15.6	11.7	10.2	31.51	32.17

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($38^{\circ}47.3' N.$,
 $74^{\circ}34.6' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
July						
1	-	-	-	-	-	-
2	19.7	17.8	13.4	13.0	31.73	
3	19.7	19.1	13.5	12.2	31.83	32.01
4	19.1	18.8	13.1	9.7	31.40	
5	19.4	-	-	-	31.36	
6	21.5	18.2	13.6	10.1	31.24	
7	20.4	19.0	13.8	11.8	31.27	
8	21.9	18.7	13.8	10.5	31.22	
9	21.7	21.0	12.7	10.0	31.32	
10	20.5	19.0	12.6	9.8	31.26	32.30
11	21.2	20.5	14.3	11.5	31.00	
12	21.2	20.7	14.4	11.0	31.08	
13	21.8	21.0	13.8	10.4	31.12	
14	22.5	21.2	14.6	11.2	31.29	
15	22.8	-	-	-	31.72	
16	23.0	-	-	-	31.73	
17	23.0	22.2	14.2	11.5	31.68	32.20
18	23.9	-	-	-	31.73	
19	21.3	21.3	11.9	8.0	31.72	
20	22.2	-	-	-	-	
21	20.6	-	-	-	31.79	
22	-	-	-	-	31.81	
23	22.8	-	-	-	31.94	
24	23.3	-	-	-	31.68	
25	22.8	-	-	-	31.66	
26	22.2	-	-	-	31.57	
27	23.3	-	-	-	31.64	
28	22.8	-	-	-	31.56	
29	22.2	-	-	-	31.46	
30	22.2	-	-	-	31.49	
31	22.8	-	-	-	31.86	
Mean	21.8				31.53	32.17

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($38^{\circ}47.3' N.$,
 $74^{\circ}34.6' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
August						
1	22.2	-	-	-	31.79	
2	21.7	-	-	-	31.62	
3	22.2	21.7	13.1	9.8	31.74	
4	22.3	21.8	11.8	8.8	31.68	
5	22.2	22.0	13.8	10.0	31.75	
6	22.1	20.0	11.5	(9.9)	31.78	
7	23.0	21.0	9.9	9.4	31.77	32.31
8	22.8	19.5	9.0	8.7	31.48	
9	21.7	17.5	9.3	9.0	31.27	
10	22.1	21.6	8.6	8.2	31.48	
11	21.0	19.6	8.1	7.0	31.80	
12	22.9	22.3	9.7	7.2	31.64	
13	22.2	20.7	10.6	8.3	31.91	
14	22.6	19.3	7.4	7.0	31.74	32.41
15	23.6	23.2	10.5	8.2	31.75	
16	24.5	23.2	12.1	8.7	31.58	
17	24.8	21.6	9.9	9.4	31.42	
18	24.2	22.2	10.7	9.1	31.58	
19	25.2	21.4	10.5	9.6	31.14	
20	-	-	-	-	-	
21	24.9	23.0	11.4	9.2	31.05	32.34
22	-	-	-	-	-	
23	23.9	23.7	14.0	10.3	31.32	
24	22.2	22.2	13.6	9.2	31.29	
25	22.0	17.8	13.6	11.3	31.40	
26	-	-	-	-	-	
27	23.3	18.0	12.5	12.5	31.35	
28	24.1	22.8	12.5	11.8	31.29	31.65
29	-	-	-	-	-	
30	18.0	18.0	16.5	9.1	31.54	
31	19.6	18.7	17.0	9.6	31.76	
Mean	22.6	20.9	11.5	9.3	31.55	32.18

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($38^{\circ}47.3' N.$,
 $74^{\circ}34.6' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
September						
1	20.5	20.3	13.7	12.5	31.84	
2	19.4	18.9	9.7	9.6	31.79	
3	19.7	19.6	12.5	0.1	31.80	
4	21.0	20.5	17.4	10.6	31.79	
5	20.8	20.5	17.3	12.1	31.87	
6	18.3	18.0	15.4	11.7	31.86	
7	20.0	18.3	18.1	14.2	31.86	
8	21.8	21.3	20.8	14.2	31.90	
9	21.0	21.0	19.8	13.4	31.86	31.93
10	21.7	21.2	20.0	15.1	31.83	
11	22.0	20.9	17.3	13.0	31.85	
12	21.1	21.0	20.6	14.6	31.87	
13	21.1	20.8	20.5	19.7	31.87	
14	19.4	19.0	18.7	18.5	31.87	
15	19.4	-	-	-	31.82	31.82
16	19.4	17.7	17.2	16.9	31.82	
17	20.0	19.7	18.4	17.1	31.79	
18	18.3	17.5	17.2	16.0	31.78	
19	21.0	20.1	19.5	18.0	31.80	
20	21.1	20.8	20.6	19.8	31.79	
21	21.3	20.2	19.3	17.6	31.77	
22	22.2	21.9	19.5	13.8	31.80	
23	22.8	-	-	-	31.80	
24	22.4	22.1	19.5	12.0	31.64	
25	20.8	20.7	16.6	12.4	31.62	
26	17.8	-	-	-	31.61	
27	20.6	-	-	-	31.74	
28	19.7	19.8	13.7	13.5	31.80	
29	18.9	18.9	18.8	16.8	31.88	
30	19.9	19.6	19.4	18.5	31.80	31.95
31						
Mean	20.4	20.0	16.0	14.9	31.81	31.90

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 ($38^{\circ}47.3' N.$,
 $74^{\circ}34.6' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
October						
1	19.4	-	-	-	31.78	
2	18.7	18.7	15.6	13.3	31.82	
3	19.4	-	-	-	31.82	
4	18.0	17.8	17.7	12.9	31.91	
5	16.1	-	-	-	31.84	
6	15.7	15.3	13.5	-	32.04	
7	16.7	16.4	16.4	-	31.92	32.03
8	17.8	16.9	16.7	13.8	31.83	
9	16.4	16.2	16.0	12.6	31.94	
10	16.7	-	-	-	31.89	
11	16.5	16.4	16.3	13.0	31.85	
12	16.1	-	-	-	31.96	
13	16.1	16.1	15.9	11.0	31.94	
14	16.1	-	-	-	31.85	31.87
15	17.0	16.5	14.1	10.9	31.90	
16	16.3	16.3	11.5	9.5	-	
17	-	-	-	-	-	
18	15.4	15.2	15.2	14.3	32.03	
19	15.2	15.2	14.4	12.3	31.94	
20	16.3	15.9	15.9	12.9	31.95	
21	15.7	15.7	15.6	13.9	31.95	
22	16.0	15.9	15.9	14.4	31.90	
23	15.9	15.8	14.4	14.2	31.89	31.99
24	15.8	15.7	14.3	-	31.92	
25	-	-	-	-	-	
26	10.4	10.4	10.3	10.3	31.95	
27	14.0	14.0	14.0	12.0	31.99	
28	14.0	14.1	13.3	-	32.00	
29	-	-	-	-	-	
30	-	-	-	-	-	
31	12.8	12.7	12.7	-	32.02	
Mean	16.1	15.6	14.7	(12.6)	31.92	31.96

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{o}/oo$), 1965 (38°47.3' N.,
74°34.6' W.; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
November						
1	-	-	-	-	-	
2	-	-	-	-	-	
3	-	-	-	-	-	
4	15.0	14.8	13.9	13.8	32.18	
5	10.4	10.3	10.3	10.1	32.25	
6	14.7	14.6	14.6	14.6	32.06	32.09
7	13.0	12.5	12.3	12.3	32.13	
8	10.7	10.7	10.6	9.5	32.13	
9	-	-	-	-	-	
10	10.4	-	-	-	32.02	
11	10.5	-	-	-	32.13	
12	12.2	-	-	-	32.30	
13	12.2	-	-	-	32.15	32.20
14	12.2	-	-	-	32.20	
15	9.4	-	-	-	32.21	
16	-	-	-	-	-	
17	-	-	-	-	-	
18	-	-	-	-	-	
19	8.9	-	-	-	32.12	
20	10.0	-	-	-	31.98	31.98
21	11.7	-	-	-	32.13	
22	11.1	-	-	-	32.10	
23	10.6	-	-	-	32.12	
24	10.0	-	-	-	32.10	
25	9.4	-	-	-	32.10	
26	10.0	-	-	-	32.14	
27	-	-	-	-	-	
28	10.0	-	-	-	32.34	
29	-	-	-	-	-	
30	8.9	9.0	9.0	-	32.49	
31						
Mean	11.0	-	-	-	32.16	32.09

Table 10.--Five Fathom Bank Lightship: temperature ($^{\circ}$ C.)
and salinity ($^{\circ}/oo$), 1965 ($38^{\circ}47.3' N.$,
 $74^{\circ}34.6' W.$; water depth: 24 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	24 m.	0 m.	24 m.
December						
1	7.7	8.0	8.1	8.4	-	
2	9.0	9.0	9.1	9.1	-	
3	10.5	10.6	10.6	10.5	32.51	
4	10.0	10.1	10.1	(10.1)	32.24	32.36
5	7.3	7.5	7.5	7.6	-	
6	8.8	8.8	8.8	8.8	-	
7	-	-	-	-	-	
8	8.0	8.0	8.0	8.0	-	
9	7.6	7.6	7.7	7.8	-	
10	9.4	-	-	-	32.48	
11	9.2	9.2	9.2	9.2	-	32.50
12	9.1	9.2	9.2	9.2	-	
13	9.2	9.3	9.2	9.1	32.45	
14	9.0	9.0	9.0	9.0	32.46	
15	7.3	7.3	7.3	7.3	-	
16	8.7	8.8	8.8	8.8	-	
17	8.7	8.7	8.7	8.7	32.31	
18	7.0	7.0	7.0	7.0	-	
19	7.0	7.2	7.1	7.1	-	
20	5.5	5.7	5.7	5.7	32.37	
21	5.8	5.8	5.8	5.8	-	
22	8.0	8.0	8.0	8.0	32.47	
23	8.0	8.2	8.1	8.0	-	
24	8.0	8.0	8.0	8.0	-	
25	-	-	-	-	-	
26	-	-	-	-	-	
27	6.2	6.1	6.1	6.1	-	
28	4.4	-	-	-	32.62	
29	7.2	7.2	7.2	7.2	-	
30	7.3	7.2	7.2	7.2	-	
31	7.1	7.2	7.7	7.8	32.58	
Mean	7.9	8.0	7.7	7.8	32.45	

Delaware Lightship (fig. 11, table 11)

Temperature trends at this lightship were similar to those at Five Fathom Bank Lightship. There were 8 record low decades of surface temperature and 13 of bottom temperature.

Surface salinity was at a minimum in late August and at a secondary minimum in early May. The normal curve for this station has no sharp minimum. As at nearby stations, salinities were generally below normal early in the year and above normal later.

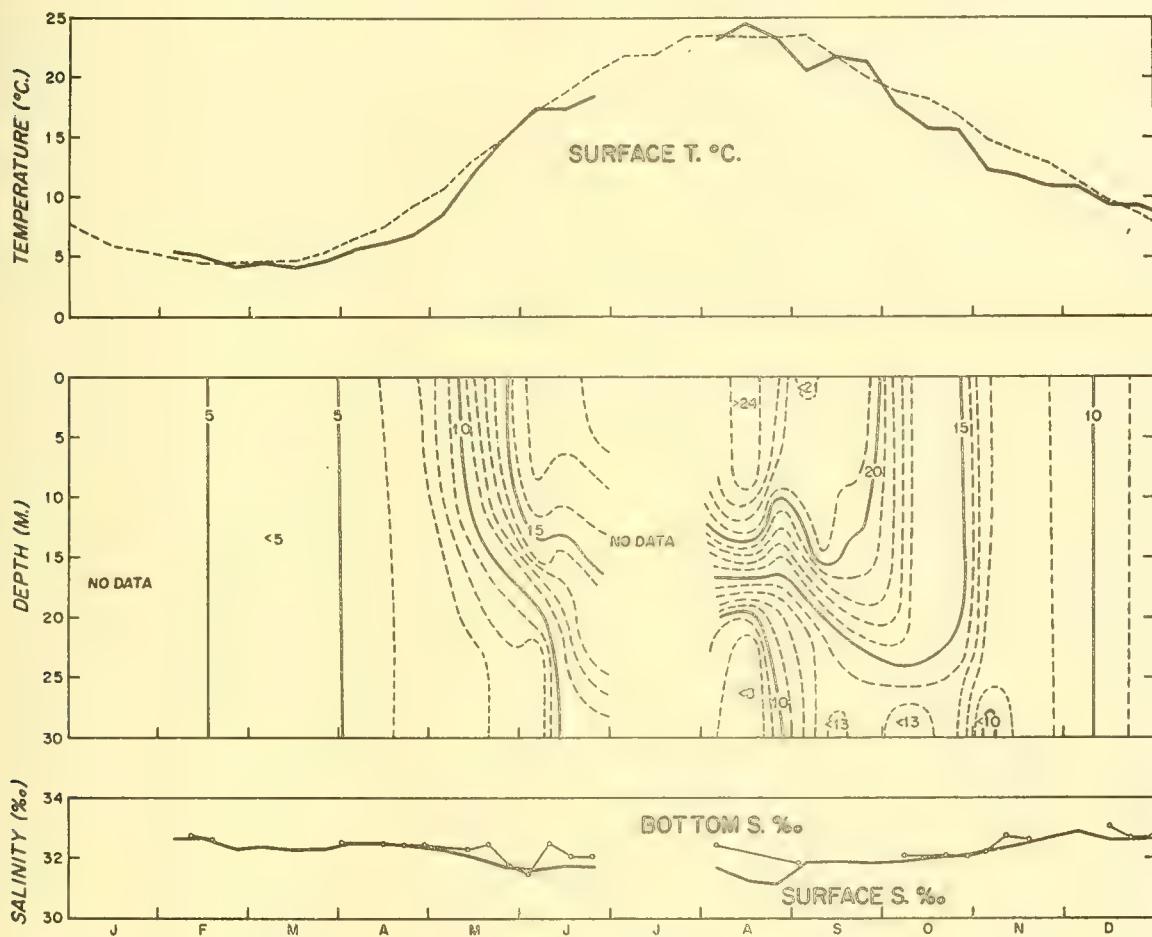


Figure 11.--Delaware Lightship, 1965. (The dashed line in the upper diagram is mean for 1956-64 at Delaware and Winter Quarter Lightships.)

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/\text{oo}$), 1965 ($38^{\circ}27.2' \text{ N.}$, $74^{\circ}35.1' \text{ W.}$; water depth: 30 meters)

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
January						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
Mean						

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($38^{\circ}27.2' N.$, $74^{\circ}35.1' W.$; water depth: 30 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
February						
1	6.3	6.2	6.2	6.2	32.75	
2	6.0	6.1	6.1	6.1	32.75	
3	6.1	-	-	-	32.86	
4	4.7	4.7	4.5	4.4	32.29	
5	5.0	5.0	5.0	5.1	32.67	
6	5.4	5.4	5.4	5.3	32.73	
7	5.1	5.1	5.0	5.1	32.66	
8	4.9	4.9	5.0	5.0	32.44	
9	5.0	5.0	5.0	5.1	32.44	
10	5.2	5.2	5.2	5.1	32.68	
11	5.2	5.2	5.3	5.3	32.70	32.78
12	5.6	5.5	5.4	5.4	32.68	
13	5.1	5.1	5.2	5.5	32.53	
14	5.0	5.0	5.0	5.0	32.74	
15	5.3	5.3	5.3	5.1	32.68	
16	-	-	-	-	-	
17	5.3	5.3	5.3	5.2	32.69	
18	5.1	5.0	5.0	5.0	32.61	32.61
19	4.4	-	-	-	32.73	
20	-	-	-	-	-	
21	-	-	-	-	-	
22	-	-	-	-	-	
23	4.1	4.1	4.1	4.4	32.34	
24	3.9	4.0	4.0	4.4	32.18	
25	-	-	-	-	-	
26	4.4	4.4	4.4	4.4	32.38	
27	4.2	4.2	4.2	4.1	32.35	
28	4.2	4.2	4.3	4.5	32.31	
-- 29						
30						
31						
Mean	5.0	5.0	5.0	5.0	32.57	32.70

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($38^{\circ}27.2' N.$, $74^{\circ}35.1' W.$; water depth: 30 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
March						
1	4.4	4.4	4.3	4.3	32.61	
2	4.4	4.4	4.3	4.3	32.43	
3	4.3	4.3	4.3	4.3	32.35	
4	4.5	4.3	4.3	4.3	32.47	
5	4.7	4.5	4.5	4.5	32.55	
6	5.0	5.0	5.0	5.0	32.45	
7	4.9	5.0	5.0	4.9	32.38	
8	4.6	4.4	4.4	4.6	32.33	
9	4.0	4.0	4.1	4.5	32.20	
10	4.2	4.2	4.2	4.3	32.34	
11	4.4	-	-	-	-	
12	3.8	3.8	3.8	3.8	32.13	
13	3.9	3.9	3.9	3.8	32.22	
14	4.0	3.9	3.9	4.0	32.23	
15	4.7	4.7	4.7	4.7	32.38	
16	4.1	4.0	4.0	4.0	32.15	
17	4.2	4.3	4.2	4.5	32.22	
18	4.4	-	-	-	32.38	
19	4.4	-	-	-	32.38	
20	4.4	-	-	-	32.31	
21	4.3	4.3	4.3	4.2	32.48	
22	4.3	4.2	4.1	4.2	32.37	
23	4.5	4.5	4.4	4.4	32.42	
24	4.7	4.7	4.7	4.6	32.16	
25	4.5	4.5	4.5	4.5	32.44	
26	4.7	4.4	4.3	4.2	32.21	
27	4.5	4.3	-	-	-	
28	4.6	4.4	4.3	4.3	32.18	
29	4.7	4.5	4.4	4.3	32.13	
30	4.7	4.7	4.7	4.7	32.38	
31	4.7	4.6	4.6	4.5	32.48	
Mean	4.4	4.4	4.4	4.4	32.34	

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($38^{\circ}27.2' N.$, $74^{\circ}35.1' W.$; water depth: 30 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
April						
1	5.0	5.0	5.0	5.0	32.53	32.58
2	5.0	-	-	-	32.46	
3	5.1	5.1	5.1	5.1	32.66	
4	5.6	-	-	-	32.54	
5	5.5	5.1	5.0	5.0	32.54	
6	5.7	5.5	5.3	5.1	32.52	
7	5.6	5.5	5.2	5.1	32.52	
8	6.5	6.4	6.3	6.0	32.52	-
9	5.8	5.7	5.7	5.3	-	
10	5.8	5.7	5.7	5.6	32.51	
11	5.7	5.3	5.3	5.3	32.54	
12	6.0	5.8	5.6	5.5	32.58	
13	5.6	-	-	-	32.58	
14	5.7	5.5	5.5	5.5	32.51	
15	5.6	-	-	-	32.52	32.51
16	6.6	5.7	5.7	5.7	32.51	
17	6.7	6.4	6.4	6.1	32.41	
18	6.3	6.1	6.1	6.0	32.52	
19	6.7	-	-	-	32.66	
20	6.8	6.5	6.6	6.2	32.50	
21	6.0	6.0	6.0	6.0	32.68	
22	7.2	-	-	-	32.46	32.46
23	7.2	-	-	-	32.42	
24	6.5	6.3	6.2	6.0	32.60	
25	6.2	6.2	6.2	6.2	32.40	
26	6.0	6.0	6.0	6.0	32.34	
27	6.7	-	-	-	-	
28	7.8	7.3	6.6	6.5	32.29	
29	7.8	7.3	6.6	6.4	32.31	32.48
30	7.8	7.4	6.6	6.5	32.20	
31						
Mean	6.2	6.0	5.9	5.7	32.49	32.51

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($38^{\circ}27.2' N.$, $74^{\circ}35.1' W.$; water depth: 30 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
May						
1	8.0	7.1	5.9	5.9	32.33	
2	7.9	7.3	6.8	6.7	32.36	
3	9.0	8.1	6.8	6.7	32.42	
4	8.1	7.4	5.9	5.9	32.23	
5	9.0	8.7	5.9	5.9	32.33	
6	8.7	8.1	6.8	6.8	32.27	
7	8.3	8.3	7.5	6.7	32.51	
8	8.3	-	-	-	32.14	
9	-	-	-	-	-	
10	10.0	9.0	8.9	7.1	32.30	
11	11.0	8.5	8.4	7.2	31.88	
12	10.0	9.6	8.0	7.4	32.22	
13	11.3	10.3	9.0	7.2	32.19	32.33
14	11.1	-	-	-	32.26	
15	12.6	12.5	10.0	8.2	32.10	
16	12.5	11.0	9.9	6.7	32.24	
17	10.0	9.4	7.5	4.8	32.08	
18	13.0	12.2	7.5	6.9	32.04	
19	15.0	-	-	-	31.84	
20	13.1	11.1	8.0	5.5	31.55	32.46
21	11.7	-	-	-	31.71	
22	10.6	-	-	-	31.70	
23	13.9	-	-	-	31.71	
24	13.9	-	-	-	32.10	
25	13.9	-	-	-	31.86	
26	15.0	13.9	8.8	7.1	31.73	
27	16.3	14.1	10.2	6.8	31.52	31.77
28	18.3	15.5	11.7	8.7	31.49	
29	16.0	15.6	10.4	7.1	31.70	
30	16.8	15.9	14.0	8.3	31.85	
31	16.0	15.3	10.1	8.7	31.84	
Mean	12.0	10.9	8.5	7.3	32.02	32.19

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($38^{\circ}27.2' N.$, $74^{\circ}35.1' W.$; water depth: 30 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
June						
1	16.0	15.1	11.1	7.4	31.52	
2	17.2	-	-	-	31.50	31.50
3	16.7	-	-	-	31.75	
4	16.7	-	-	-	31.73	
5	16.3	15.5	13.5	7.1	31.74	
6	17.8	17.2	14.7	8.5	31.63	
7	18.3	-	-	-	31.57	
8	18.9	17.8	15.4	-	31.53	
9	17.8	17.4	14.0	6.8	31.52	
10	18.1	17.9	16.0	6.6	31.66	32.52
11	18.6	17.1	11.9	6.6	31.64	
12	18.8	17.6	12.1	6.3	31.68	
13	19.0	17.4	12.7	6.5	31.65	
14	19.0	18.6	13.0	6.6	31.67	
15	18.9	-	-	-	31.67	
16	-	-	-	-	-	
17	15.2	14.9	14.9	14.9	32.10	32.04
18	15.0	-	-	-	31.80	
19	15.4	15.1	15.0	14.9	31.96	
20	16.0	15.6	15.3	14.2	31.84	
21	18.3	-	-	-	31.63	
22	16.7	-	-	-	31.74	
23	17.8	16.8	15.7	9.5	31.85	
24	18.3	-	-	-	31.72	32.04
25	18.1	17.6	15.3	9.8	31.80	
26	18.5	16.6	15.6	10.8	31.71	
27	18.9	-	-	-	-	
28	18.9	-	-	-	-	
29	19.4	16.4	15.1	11.1	-	
30	19.4	-	-	-	-	
31						
Mean	17.1	16.7	14.2	9.2	31.70	32.02

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($38^{\circ}27.2' N.$, $74^{\circ}35.1' W.$; water depth: 30 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
July						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
Mean						

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($38^{\circ}27.2' N.$, $74^{\circ}35.1' W.$; water depth: 30 meters)--Continued.

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
August						
1	22.8	22.6	17.8	7.9	31.62	
2	22.0	21.8	15.6	8.7	32.01	
3	22.2	22.1	16.1	-	32.05	
4	22.8	22.3	19.1	8.5	31.64	
5	22.8	-	-	-	31.66	32.44
6	22.8	-	-	-	31.99	
7	22.9	22.3	16.0	8.0	31.66	
8	22.8	-	-	-	-	
9	24.4	23.6	14.9	-	31.46	
10	24.1	23.9	17.0	8.0	31.47	
11	23.9	-	-	-	-	
12	23.9	-	-	-	31.17	
13	23.9	23.2	-	-	31.14	
14	23.9	-	-	-	31.10	
15	23.9	-	-	-	-	
16	25.0	-	-	-	-	
17	25.5	24.9	19.6	8.3	31.09	
18	25.7	24.8	20.8	-	31.04	
19	24.9	23.3	16.1	7.2	30.89	
20	24.2	24.1	14.8	7.6	32.10	
21	25.0	23.7	16.3	-	30.96	
22	25.0	24.7	18.4	7.9	31.28	
23	25.3	21.3	16.1	9.6	30.92	
24	25.3	21.8	18.4	9.4	30.86	
25	24.6	21.4	16.8	9.6	-	
26	24.4	-	-	-	30.78	
27	22.9	19.4	12.5	10.0	31.36	
28	24.8	24.3	16.0	9.4	31.22	
29	23.0	20.1	12.7	9.9	-	
30	18.0	18.0	17.7	8.9	31.66	
31	17.8	16.4	15.7	7.7	31.68	
Mean	23.6	22.3	16.6	8.6	31.39	

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and
salinity ($^{o}/oo$), 1965 ($38^{\circ}27.2' N.$,
 $74^{\circ}35.1' W.$; water depth: 30 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
September						
1	17.8	-	-	-	31.75	
2	20.0	-	-	-	31.73	31.82
3	20.0	-	-	-	31.71	
4	20.0	-	-	-	31.71	
5	20.0	-	-	-	-	
6	20.0	-	-	-	32.02	
7	21.1	-	-	-	32.01	
8	22.2	-	-	-	32.15	
9	22.2	-	-	-	-	
10	21.8	21.7	20.9	13.3	32.02	
11	21.7	21.6	21.3	11.1	31.90	
12	22.2	22.1	22.0	10.9	32.14	
13	21.9	-	-	-	32.07	
14	22.2	-	-	-	31.82	
15	21.3	21.3	21.3	12.9	31.83	
16	22.2	-	-	-	31.88	
17	22.2	-	-	-	31.83	
18	20.9	20.6	20.4	11.5	31.72	
19	21.1	20.3	17.5	12.1	31.73	
20	21.4	20.7	17.3	14.2	31.82	
21	21.3	19.8	18.0	13.2	31.75	
22	21.1	-	-	-	31.95	
23	21.6	21.5	19.4	12.2	-	
24	22.1	21.9	-	-	-	
25	22.2	-	-	-	31.88	
26	21.7	-	-	-	-	
27	21.1	-	-	-	-	
28	20.6	-	-	-	31.92	
29	20.3	20.3	20.2	13.3	31.78	
30	20.2	20.0	20.0	13.9	-	
31	-	-	-	-	-	
Mean	21.1	(21.0)	(19.8)	(12.6)	31.87	

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($38^{\circ}27.2' N.$, $74^{\circ}35.1' W.$; water depth: 30 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
October						
1	20.3	20.2	20.0	14.2	31.78	
2	19.1	19.2	19.2	12.9	31.98	
3	18.4	18.1	18.1	-	31.82	
4	17.0	17.0	16.9	10.6	31.86	
5	16.0	16.1	16.0	10.0	31.90	
6	15.6	15.4	-	-	31.76	
7	17.3	17.2	17.1	13.7	31.99	32.05
8	17.0	17.0	16.9	12.8	31.92	
9	17.3	17.2	17.2	13.4	31.99	
10	17.4	17.3	17.2	11.8	31.94	
11	15.7	15.7	15.6	11.0	31.95	
12	15.6	-	-	-	32.13	
13	15.6	-	-	-	-	
14	15.6	-	-	-	-	
15	15.6	-	-	-	-	
16	15.6	-	-	-	32.03	
17	15.6	-	-	-	32.03	
18	15	-	-	-	32.01	
19	-	-	-	-	-	
20	17.5	-	-	-	32.00	
21	16.7	16.5	16.3	13.5	31.98	32.10
22	16.9	-	-	-	31.97	
23	16.8	16.7	16.3	12.5	32.01	
24	16.7	-	-	-	-	
25	15.3	-	-	-	32.13	
26	15.4	15.3	15.0	13.4	32.11	
27	15	-	-	-	32.09	
28	15.3	15.3	15.2	12.7	32.07	32.07
29	15	-	-	-	32.15	
30	14.4	-	-	-	32.14	
31	14.4	-	-	-	32.14	
Mean	16.3	(16.9)	(16.9)	(12.5)	32.00	32.07

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($38^{\circ} 27.2' N.$, $74^{\circ} 35.1' W.$; water depth: 30 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
November						
1	13.5	13.5	13.5	11.4	32.25	
2	12.8	13.0	13.0	-	32.26	
3	13.9	-	-	-	32.22	
4	13.9	-	-	-	32.23	32.22
5	12.2	-	-	-	32.22	
6	12.2	-	-	-	-	
7	11.1	-	-	-	-	
8	11.1	-	-	-	-	
9	10	-	-	-	-	
10	9.9	9.8	9.7	8.4	32.39	
11	12.2	12.1	12.1	10.8	32.29	32.77
12	12.2	12.0	12.0	11.6	32.40	
13	12.2	-	-	-	32.41	
14	11.7	-	-	-	-	
15	11.7	-	-	-	-	
16	11.7	-	-	-	32.43	
17	-	-	-	-	-	
18	11.7	-	-	-	-	32.61
19	11.3	11.3	11.3	11.2	32.53	
20	11.3	11.1	11.1	11.0	32.66	
21	10.6	-	-	-	32.58	
22	11.3	11.2	11.2	11.1	32.54	
23	11.1	11.1	11.1	11.0	32.55	
24	10.9	10.9	10.9	10.9	32.62	
25	10.8	10.8	10.8	10.8	32.70	
26	10.8	-	-	-	32.61	
27	11.1	-	-	-	-	
28	11.7	11.5	11.5	11.4	-	
29	11.0	11.6	11.5	11.5	32.70	
30	11.1	-	-	-	32.85	
31						
Mean	11.6	(11.5)	(11.5)	10.9	32.47	32.53

Table 11.--Delaware Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($38^{\circ}27.2' N.$, $74^{\circ}35.1' W.$; water depth: 30 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	0 m.	30 m.
December						
1	12.0	11.5	11.4	-	32.97	
2	11.2	11.2	11.2	11.1	32.90	
3	11.2	11.2	11.2	11.1	32.80	
4	11.0	11.0	11.0	11.0	32.66	
5	10.9	10.9	10.9	10.8	32.80	
6	11.1	11.1	11.1	11.1	32.83	
7	10.7	10.7	10.6	10.6	32.79	
8	10.1	10.1	10.1	10.1	33.15	
9	10.0	10.0	10.0	10.0	33.05	
10	9.7	9.7	9.7	9.7	32.84	
11	9.8	9.8	9.8	9.8	32.80	
12	10.0	9.9	9.9	9.9	32.77	
13	10.0	9.8	9.7	9.7	32.68	
14	9.8	9.7	9.7	9.7	32.77	
15	9.5	9.2	9.3	9.3	32.59	33.12
16	9.3	9.1	9.1	9.2	32.45	
17	9.1	9.1	9.1	9.1	32.54	
18	9.0	9.0	9.0	9.0	32.62	
19	8.9	8.9	8.9	8.9	32.54	
20	8.7	8.6	8.6	8.5	32.58	
21	7.9	7.9	7.9	7.9	32.63	
22	8.6	8.6	8.6	8.6	32.64	32.90
23	8.7	8.7	8.7	8.6	32.81	
24	8.5	8.5	8.5	8.7	32.56	
25	8.7	8.4	8.4	8.9	32.37	
26	8.0	8.0	8.0	8.0	32.54	
27	8.5	8.4	8.4	8.3	32.76	
28	8.0	8.0	8.1	8.1	32.84	
29	8.3	8.3	8.3	8.3	32.66	32.70
30	8.0	7.9	7.9	8.1	32.60	
31	7.9	7.9	8.1	8.4	32.49	
Mean	9.5	9.4	9.4	9.4	32.71	32.84

Chesapeake Lightship and Light Station (fig. 12, table 12)

Surface water temperatures were near normal during most of the year in spite of the prevailing subnormal air temperatures. An exception to the general rule was the cold period of the first 2 decades of May when records were broken at both surface and bottom. Air temperatures were above normal most of May.

The salinity minimum, 28.08 ‰ for the last decad of May, is the second lowest value in the period of record.

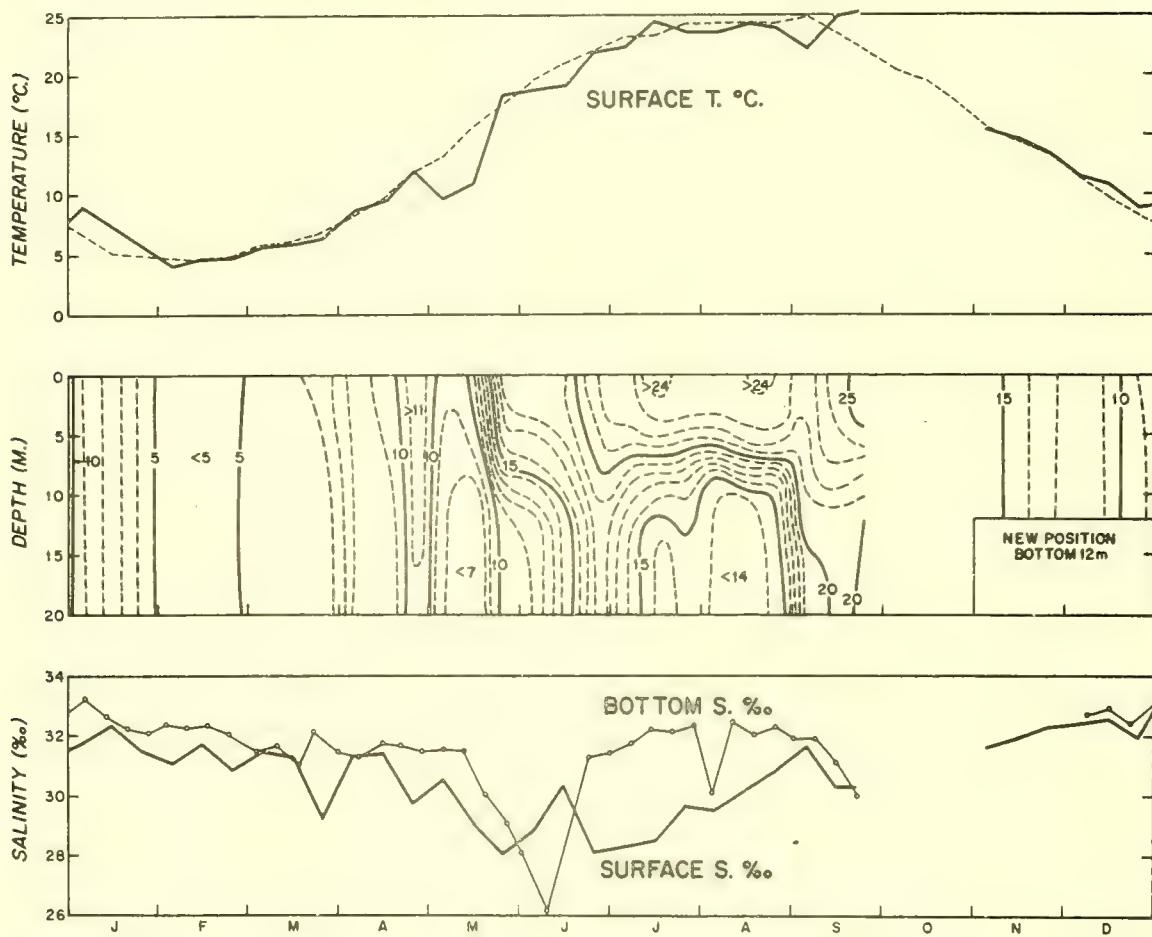


Figure 12.--Chesapeake Lightship and Light Station, 1965. (The dashed line in the upper diagram is the mean for 1956-64.)

Table 12.--Chesapeake Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 (36 $^{\circ}58.7'$ N., 75 $^{\circ}42.2'$ W.; water depth: 20 meters

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
January						
1	9.5	9.5	9.6	9.7	31.88	
2	9.4	9.4	9.4	(9.4)	31.97	
3	9.5	9.5	9.5	(9.5)	32.29	
4	9.2	9.2	9.2	9.2	32.79	
5	9.0	9.0	9.0	9.0	32.67	
6	8.9	8.9	8.9	8.9	32.71	33.23
7	9.0	8.9	8.8	8.8	32.76	
8	8.0	8.7	8.9	8.9	28.39	
9	8.2	8.9	8.9	8.9	29.68	
10	9.0	8.9	8.9	8.9	32.61	
11	8.5	8.5	8.5	8.5	32.72	
12	8.1	8.1	8.2	8.2	32.58	
13	8.1	8.1	8.1	8.1	32.55	32.66
14	8.5	8.5	8.5	(8.5)	32.68	
15	8.0	8.0	8.0	(8.0)	32.71	
16	7.7	7.8	7.8	(7.8)	32.89	
17	8.0	-	-	-	32.51	
18	7.0	-	-	-	32.52	
19	6.0	5.9	5.9	5.9	32.51	
20	4.1	5.0	5.0	5.9	29.93	32.21
21	5.0	5.0	5.2	5.3	31.57	
22	5.8	5.4	5.4	5.4	32.11	
23	5.1	6.1	6.3	6.3	30.76	
24	6.1	6.1	6.0	5.9	32.03	
25	6.0	5.9	5.9	6.0	31.57	
26	6.0	6.0	5.9	5.9	31.64	
27	6.0	6.1	6.1	6.1	31.43	32.08
28	5.9	5.9	5.9	5.9	31.88	
29	6.0	-	-	-	29.04	
30	5.5	5.4	5.5	5.5	32.04	
31	4.9	4.9	4.9	4.9	32.14	
Mean	7.3	7.4	7.5	7.5	31.86	32.54

Table 12.--Chesapeake Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($36^{\circ}58.7' N.$, $75^{\circ}42.2' W.$; water depth: 20 meters--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
February						
1	4.7	4.7	4.7	4.7	32.58	
2	4.3	4.5	4.7	(4.9)	31.49	
3	4.2	-	-	-	32.34	32.39
4	4.1	4.2	4.3	4.3	31.94	
5	3.9	4.2	4.1	-	32.36	
6	2.4	3.3	4.0	4.3	28.74	
7	3.7	4.0	4.6	4.6	29.30	
8	3.9	-	-	-	30.31	
9	4.5	4.5	4.6	4.7	30.60	
10	4.8	4.8	4.8	4.8	31.07	32.22
11	3.5	4.0	4.2	4.2	30.74	
12	5.1	4.9	5.0	-	30.75	
13	5.4	4.9	5.0	5.0	30.85	
14	5.0	-	-	-	31.72	
15	4.4	4.5	4.5	4.5	32.31	
16	5.0	-	-	-	32.46	
17	4.3	4.4	4.6	4.6	31.92	32.37
18	5.0	4.9	4.9	5.0	31.71	
19	5.0	-	-	-	32.36	
20	4.7	4.7	4.7	4.8	32.46	
21	4.0	4.8	4.9	4.9	29.16	
22	4.4	4.4	4.5	4.5	32.00	
23	4.9	4.9	4.9	4.9	32.12	
24	4.5	4.5	4.7	4.8	31.02	32.04
25	5.0	5.0	4.8	4.7	30.97	
26	5.0	5.0	5.1	5.1	31.33	
27	5.0	5.0	5.0	5.0	31.19	
28	4.9	5.0	5.0	(5.0)	29.05	
29						
30						
31						
Mean	4.5	4.6	4.7	4.7	31.24	32.26

Table 12.--Chesapeake Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($36^{\circ}58.7'$ N., $75^{\circ}42.2'$ W.; water depth: 20 meters--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
March						
1	5.3	5.2	5.3	(5.3)	31.18	
2	5.5	5.2	5.4	(5.4)	31.20	
3	5.5	5.3	5.3	(5.3)	31.30	31.48
4	5.5	5.5	5.5	(5.5)	31.46	
5	5.6	5.6	5.7	(5.7)	31.60	
6	5.8	5.2	5.5	(5.7)	31.63	
7	5.6	-	-	-	31.65	
8	5.6	-	-	-	31.64	
9	6.0	5.3	5.4	(5.4)	31.63	
10	5.6	5.6	5.5	5.5	31.62	31.69
11	5.6	-	-	-	31.66	
12	5.3	5.2	5.2	5.2	31.88	
13	5.5	5.1	5.1	5.1	32.03	
14	5.6	5.4	5.3	(5.3)	31.17	
15	5.8	5.8	5.5	(5.5)	30.12	
16	6.0	5.7	5.3	5.2	30.48	
17	6.1	5.7	5.5	5.5	30.08	31.08
18	6.0	5.9	5.7	(5.7)	31.18	
19	5.9	5.9	5.9	5.9	31.87	
20	5.9	5.9	5.9	5.9	32.10	
21	5.2	5.2	5.2	5.3	32.23	
22	5.6	5.4	5.4	5.4	29.57	
23	6.0	5.5	5.4	(5.4)	26.57	
24	6.5	5.7	5.5	5.5	26.35	32.12
25	6.4	5.5	5.5	5.5	28.61	
26	6.2	5.7	5.3	5.3	28.94	
27	6.1	5.9	5.4	5.4	31.28	
28	6.5	6.0	5.9	(5.7)	30.77	
29	7.8	6.1	5.8	(5.8)	26.51	
30	7.1	6.1	5.9	5.9	30.03	
31	6.8	6.6	6.2	(6.1)	31.22	31.49
Mean	5.9	5.6	5.5	5.5	30.63	31.57

Table 12.--Chesapeake Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($36^{\circ}58.7' N.$, $75^{\circ}42.2' W.$; water depth: 20 meters--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
April						
1	8.9	-	-	-	30.77	
2	8.3	7.8	7.8	(7.8)	30.44	
3	8.0	8.0	8.0	(8.0)	31.91	
4	8.2	8.0	8.0	(8.0)	31.85	
5	8.2	8.0	8.0	8.0	31.87	
6	8.8	8.3	8.3	(8.3)	31.63	
7	9.0	8.2	8.1	8.1	31.18	31.31
8	8.3	8.1	8.1	8.1	31.79	
9	9.0	7.2	7.2	(7.2)	30.27	
10	9.0	8.3	8.3	(8.3)	31.80	
11	8.0	7.3	7.2	(7.2)	31.63	
12	9.6	7.3	7.2	(7.2)	30.78	
13	-	-	-	-	-	
14	10.1	10.1	10.1	(10.1)	31.73	31.74
15	10.0	10.1	10.1	10.1	31.75	
16	10.0	8.7	8.7	8.7	31.30	
17	8.5	7.2	7.1	(7.1)	30.85	
18	12.3	10.7	10.2	(10.2)	31.47	
19	8.3	8.3	7.9	(7.7)	31.53	
20	8.5	8.5	8.5	(8.5)	31.58	
21	9.5	9.1	9.1	(9.1)	26.60	31.68
22	13.0	11.0	10.6	(10.6)	26.64	
23	11.7	-	-	-	27.14	
24	12.0	10.7	11.0	(11.0)	31.02	
25	11.7	11.4	11.5	(11.5)	31.40	
26	11.6	11.4	11.3	(11.3)	31.45	
27	12.2	11.3	11.1	(11.0)	29.06	
28	11.9	11.7	11.7	(11.7)	31.32	31.50
29	12.3	11.8	11.8	(11.7)	31.46	
30	12.0	11.2	11.0	(11.0)	31.42	
31						
Mean	9.6	9.2	9.2	9.2	30.82	31.56

Table 12.--Chesapeake Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($36^{\circ}58.7' N.$, $75^{\circ}42.2' W.$; water depth: 20 meters--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
May						
1	10.6	9.3	8.9	(8.9)	31.54	
2	10.0	9.7	9.1	(9.0)	28.82	
3	10.0	-	-	-	29.98	
4	10.5	6.1	5.8	5.8	29.20	
5	10.2	6.6	6.4	(6.4)	-	31.59
6	9.0	-	-	-	31.50	
7	8.8	8.5	8.3	8.1	31.58	
8	9.0	8.6	8.7	8.7	31.43	
9	9.5	8.7	8.8	(8.8)	31.32	
10	9.6	8.9	8.6	(8.4)	29.53	
11	10.0	6.1	5.2	(5.2)	28.60	
12	11.0	9.7	8.1	(8.0)	30.71	31.53
13	11.2	9.0	7.9	(7.9)	30.63	
14	10.8	10.4	9.0	(9.0)	31.37	
15	11.8	10.4	10.3	10.3	31.43	
16	10.5	7.4	6.3	-	26.88	
17	9.6	7.4	5.4	(5.5)	29.40	
18	9.8	7.2	4.9	(4.9)	29.93	
19	11.5	5.4	4.3	(4.3)	26.94	30.04
20	12.6	6.6	4.8	(4.7)	25.20	
21	12.3	7.7	5.1	5.0	26.68	
22	18.1	13.1	10.7	(10.4)	28.09	
23	20.1	11.2	10.7	(10.4)	25.51	
24	19.0	11.0	10.5	10.4	28.08	
25	17.8	16.5	11.1	10.9	29.78	
26	19.4	11.7	11.1	(11.1)	28.21	29.09
27	19.7	11.2	10.7	(10.5)	27.67	
28	17.3	12.5	9.8	(9.8)	28.24	
29	20.0	-	-	-	29.28	
30	20.0	18.9	12.6	12.5	29.28	
31	18.0	16.8	11.1	(11.0)	-	
Mean	13.2	9.9	8.4	8.4	29.20	30.56

Table 12.--Chesapeake Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($36^{\circ}58.7' N.$, $75^{\circ}42.2' W.$; water depth: 20 meters--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
June						
1	18.5	13.2	10.8	(10.7)	27.79	
2	18.4	13.1	10.4	10.4	29.64	28.08
3	16.3	11.9	11.0	11.0	29.19	
4	17.0	14.3	10.7	10.6	29.60	
5	18.1	14.6	11.3	11.3	29.67	
6	17.5	15.2	11.0	(10.6)	28.33	
7	19.4	11.9	11.3	-	27.17	
8	20.0	-	-	-	31.81	
9	20.5	15.9	12.2	-	28.06	26.18
10	21.0	13.8	11.9	11.8	27.07	
11	21.5	13.4	11.6	(11.6)	29.28	
12	20.3	15.1	10.7	(10.7)	29.31	
13	19.5	15.8	11.1	(10.7)	29.89	
14	19.6	16.8	10.5	(10.5)	30.91	
15	18.0	-	-	-	-	
16	17.0	-	-	-	30.62	
17	17.8	17.7	17.6	17.5	30.82	
18	18.0	17.5	17.4	(17.1)	30.49	
19	19.1	18.5	18.2	(18.1)	30.60	
20	18.8	17.7	16.9	(16.9)	30.82	
21	20.5	18.0	16.8	16.6	27.31	
22	23.0	-	-	-	-	
23	22.6	19.3	18.2	(18.1)	26.14	31.28
24	21.0	16.7	16.3	(16.2)	26.63	
25	21.5	20.4	18.1	(18.0)	28.17	
26	21.2	20.5	19.0	(18.7)	29.16	
27	21.0	20.8	20.2	(20.1)	30.17	
28	21.9	20.8	20.1	(20.0)	29.65	
29	21.5	18.5	17.7	(17.3)	27.99	
30	23.5	21.0	18.2	(18.2)	28.30	31.41
31						
Mean	19.8	16.6	14.6	14.7	29.09	29.24

Table 12.--Chesapeake Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 (36 $^{\circ}58.7'$ N., 75 $^{\circ}42.2'$ W.; water depth: 20 meters--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
July						
1	21.1	18.6	16.2	(16.2)	29.31	
2	21.0	18.4	17.0	(16.9)	30.02	
3	22.0	20.4	17.3	17.3	28.97	
4	22.3	17.4	16.5	(16.1)	27.22	
5	23.1	21.3	16.7	(16.6)	27.78	
6	21.5	17.2	15.9	(15.9)	28.57	
7	22.5	17.1	15.6	(15.3)	28.00	31.78
8	22.5	17.8	15.3	15.1	27.12	
9	23.1	19.4	16.2	(16.2)	29.11	
10	23.5	18.3	15.5	(15.1)	27.65	
11	23.9	18.0	14.8	14.8	27.70	
12	24.0	16.9	13.8	(13.6)	26.46	
13	24.4	18.2	13.9	(13.9)	27.22	
14	24.5	17.7	14.0	14.0	27.63	32.20
15	24.4	17.1	15.1	14.8	27.82	
16	24.5	17.4	13.2	13.1	29.23	
17	24.2	17.3	12.7	(12.7)	30.47	
18	24.7	16.2	13.6	(13.6)	28.75	
19	25.0	16.3	14.2	14.2	29.46	
20	24.2	15.9	15.0	15.0	30.47	
21	24.0	20.1	15.2	(15.1)	30.78	32.12
22	23.8	20.5	15.9	15.4	30.73	
23	24.2	19.2	15.2	15.2	30.63	
24	25.0	16.9	15.9	(15.7)	28.58	
25	24.4	17.7	15.5	(15.3)	28.76	
26	24.0	16.6	15.3	(15.3)	28.80	
27	24.6	16.2	14.6	(14.5)	28.47	
28	23.8	15.9	14.8	(14.8)	28.54	32.35
29	20.0	14.7	13.3	13.3	30.67	
30	22.0	13.9	13.5	(13.5)	30.31	
31	22.6	13.8	13.7	13.7	29.68	
Mean	23.4	17.5	15.0	14.9	28.87	32.11

Table 12.--Chesapeake Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($36^{\circ}58.7' N.$, $75^{\circ}42.2' W.$; water depth: 20 meters--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
August						
1	24.0	14.8	14.7	14.7	29.64	
2	21.4	13.7	13.4	13.4	29.55	
3	22.6	14.6	13.5	13.5	29.71	
4	23.9	14.6	13.6	(13.5)	30.23	30.08
5	23.0	12.9	12.3	12.3	30.04	
6	25.0	15.0	13.8	13.6	30.31	
7	23.9	14.8	13.8	13.7	28.55	
8	24.6	14.7	13.8	(13.8)	28.22	
9	23.0	15.2	13.5	(13.5)	29.70	
10	23.9	15.5	14.7	14.3	29.41	
11	22.0	14.1	11.9	(11.9)	31.06	32.43
12	23.9	15.3	14.3	(14.0)	29.56	
13	23.0	14.6	13.3	(13.1)	29.84	
14	23.5	15.7	14.2	14.2	29.32	
15	24.5	14.9	12.8	12.7	30.26	
16	24.7	19.9	12.9	12.8	31.19	
17	24.0	12.6	12.4	12.4	31.15	
18	26.0	20.0	13.3	13.2	30.85	32.03
19	25.7	18.6	14.4	14.3	28.62	
20	23.8	15.6	14.3	14.3	30.24	
21	26.0	16.3	14.3	14.0	29.72	
22	25.6	15.6	14.5	14.3	30.35	
23	24.8	14.6	13.7	(13.7)	28.71	
24	24.5	13.4	12.8	(12.7)	31.36	
25	24.5	13.4	13.2	13.2	30.17	32.28
26	25.0	16.2	14.3	(14.2)	31.35	
27	25.7	14.6	13.9	(13.9)	31.31	
28	25.8	14.9	13.8	(13.8)	30.79	
29	18.9	18.8	14.7	(14.5)	31.84	
30	20.3	20.1	17.2	16.8	31.77	
31	20.6	19.9	17.3	(16.9)	31.85	
Mean	23.8	15.6	13.9	13.8	30.22	31.70

Table 12.--Chesapeake Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$), 1965 ($36^{\circ}58.7' N.$, $75^{\circ}42.2' W.$; water depth: 20 meters)--Continued

Month and day	Temperature at depth of--				Salinity at depth of--	
	0 m.	9 m.	15 m.	20 m.	0 m.	20 m.
September						
1	21.7	21.1	16.6	16.6	31.99	31.88
2	20.9	20.0	16.7	16.0	31.42	
3	21.4	21.2	17.1	16.2	31.64	
4	21.1	21.0	17.6	17.3	31.94	
5	23.4	23.2	22.1	20.8	31.83	
6	21.1	21.0	20.6	19.8	31.86	
7	21.1	20.6	20.5	20.3	31.99	
8	23.4	22.4	22.1	(22.1)	32.09	31.88
9	22.9	21.7	21.4	(21.3)	31.18	
10	23.8	23.0	21.5	(21.4)	30.29	
11	25.6	24.0	22.4	(22.3)	29.99	
12	23.8	22.2	19.8	(19.8)	30.66	
13	24.1	22.5	20.2	20.2	30.97	
14	23.2	22.3	19.7	19.7	30.57	
15	24.4	22.0	20.2	(20.2)	30.39	31.10
16	23.1	21.7	19.6	19.5	30.40	
17	24.5	22.3	19.6	19.5	30.29	
18	25.0	21.3	19.7	(19.4)	30.06	
19	25.0	23.0	20.3	20.0	29.75	
20	28.4	23.5	22.7	22.3	29.80	
21	25.9	23.3	20.0	(19.9)	29.29	
22	24.6	20.1	19.7	(19.6)	29.96	30.00
23	24.4	-	-	-	31.10	
24*	25.5	22.0	20.2	(20.2)	30.70	
25						
26						
27						
28						
29						
30						
31						
Mean	(23.7)	22.0	20.0	19.8	30.84	31.22

*On 25 September 1965 Chesapeake Lightship was replaced by Chesapeake Light Station at $36^{\circ}54.3' N.$, $75^{\circ}42.8' W.$; water depth: 12 meters.

Table 12.--Chesapeake Light Station: temperature ($^{\circ}\text{C}.$) and salinity ($^{\circ}/\text{o}$ o), 1965 ($36^{\circ}54.3' \text{ N.}$, $75^{\circ}42.8' \text{ W.}$; water depth: 12 meters)--Continued

Month and day	Temperature at depth of-			Salinity at depth of--	
	0 m.	9 m.	12 m.	0 m.	12 m.
October					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
Mean					

Table 12.--Chesapeake Light Station: temperature ($^{\circ}\text{C}.$) and salinity ($^{\circ}/\text{o}$ o), 1965 ($36^{\circ}54.3' \text{ N.}$, $75^{\circ}42.8' \text{ W.}$; water depth: 12 meters)--Continued

Month and day	Temperature at depth of-			Salinity at depth of--	
	0 m.	9 m.	12 m.	0 m.	12 m.
November					
1	15.2	15.4	16.1	30.10	
2	15.3	15.4	15.4	30.74	
3	15.4	15.5	15.5	31.49	
4	15.3	15.3	15.3	31.25	
5	15.2	15.2	15.2	32.06	
6	15.6	15.3	15.3	31.94	
7	-	-	-	-	
8	-	-	-	-	
9	15.6	-	-	32.81	
10	15.5	15.4	15.4	32.64	
11	15.3	15.3	15.3	31.83	
12	15.0	15.0	15.0	32.78	
13	15.0	15.0	14.9	31.83	
14	15.0	15.0	14.9	32.10	
15	15.1	14.9	14.9	31.84	
16	15.1	15.0	14.9	31.89	
17	14.5	14.7	14.9	31.35	
18	14.0	14.0	14.0	31.73	
19	13.1	13.9	13.9	31.44	
20	13.5	13.4	13.4	32.60	
21	13.7	13.6	13.6	31.52	
22	13.9	13.9	13.8	34.28	
23	13.9	13.8	13.8	-	
24	13.2	13.2	13.2	31.72	
25	13.1	13.0	13.0	32.30	
26	13.7	13.2	13.1	31.93	
27	13.9	13.4	13.3	31.99	
28	13.0	12.9	13.0	32.62	
29	12.9	12.9	13.0	31.80	
30	12.6	12.5	12.5	32.26	
31					
Mean	14.4	14.3	14.3	31.96	

Table 12.--Chesapeake Light Station: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($36^{\circ}54.3' N.$, $75^{\circ}42.8' W.$; water depth: 12 meters)--Continued

Month and day	Temperature at depth of--			Salinity at depth of--	
	0 m.	9 m.	12 m.	0 m.	12 m.
December					
1	12.2	12.1	12.1	32.53	
2	12.1	12.2	12.3	32.76	
3	11.7	12.5	12.6	31.77	
4	11.7	12.0	12.1	32.89	
5	11.4	11.6	11.7	32.09	
6	11.5	11.6	11.6	32.44	
7	11.1	11.0	11.0	32.24	
8	11.0	11.0	11.0	32.26	32.74
9	10.9	10.9	10.9	32.50	
10	11.2	11.0	11.0	32.41	
11	11.0	11.0	11.0	32.68	
12	10.9	11.0	11.0	32.59	
13	11.1	-	-	32.18	
14	11.2	10.9	10.9	32.48	
15	11.1	11.0	11.0	32.54	32.91
16	11.1	11.0	11.0	32.59	
17	11.1	11.0	11.0	32.50	
18	10.9	10.8	10.8	32.54	
19	10.7	10.6	10.5	32.58	
20	9.6	9.5	9.5	32.62	
21	9.5	9.5	9.4	34.03	
22	9.5	9.4	9.4	-	32.40
23	8.8	9.9	9.9	30.66	
24	8.3	9.8	9.9	29.91	
25	9.2	9.5	9.9	30.36	
26	9.2	9.2	9.2	32.55	
27	9.0	8.9	8.9	32.90	
28	8.8	8.8	8.8	32.54	
29	9.0	9.0	9.0	32.78	
30	8.6	9.0	9.0	33.24	
31	8.3	9.0	9.0	30.24	
Mean	10.4	10.5	10.5	32.28	32.68

Diamond Shoal Lightship (fig. 13, table 13)

Surface water temperatures generally were below normal early in the year and above normal during the last 4 months. There were record low temperatures in mid-February and late June and record highs in mid-October and early November. Bottom temperatures were not observed regularly during the year but record lows were established in middle and late June.

Surface salinity was low during most of the first half of the year and high during most of the second half. Apparently coastal waters predominated early in the year whereas Gulf Stream water was more prevalent in the latter half (cf. surface temperature).

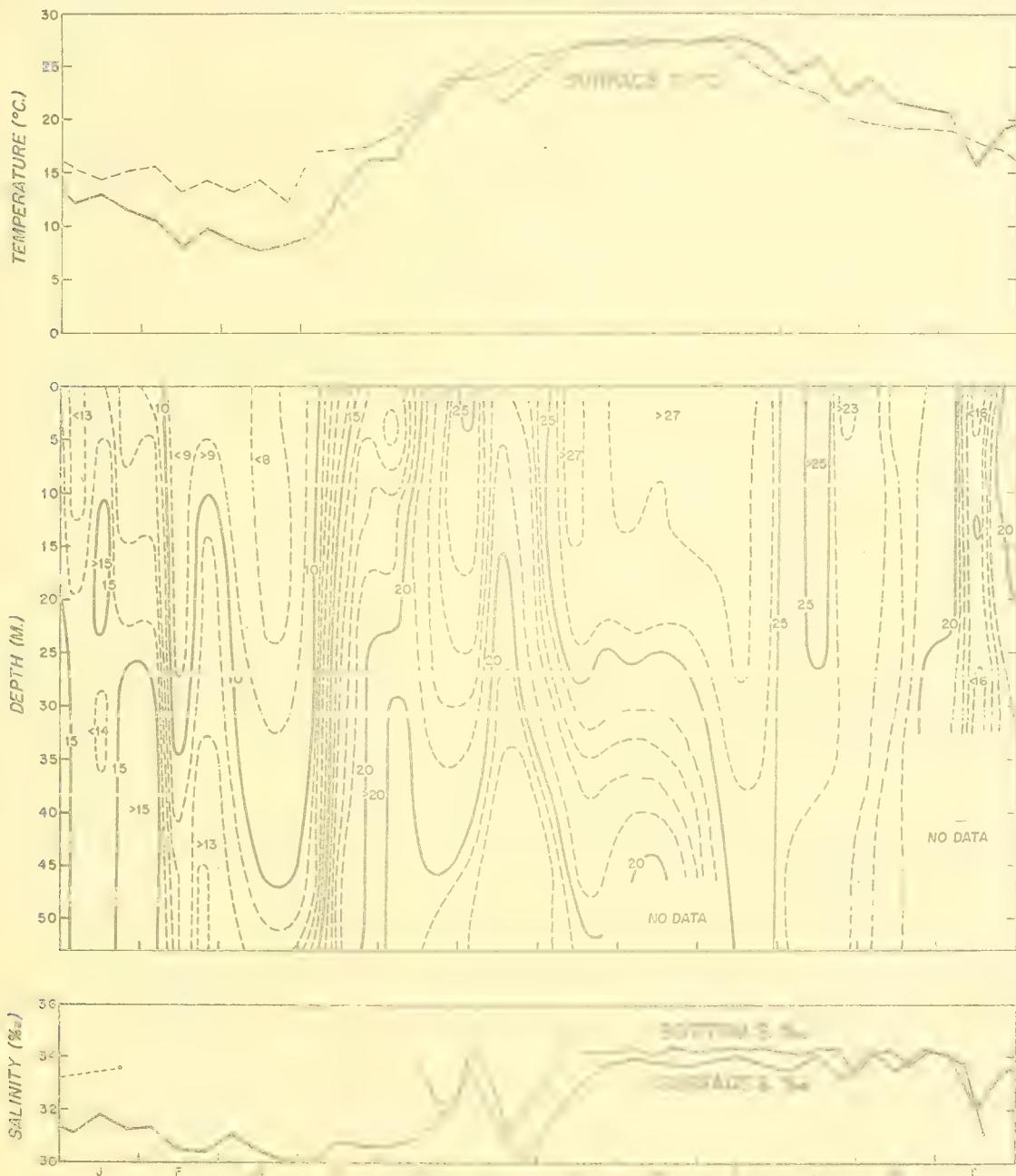


Figure 13.--Diamond Shoal Lightship, 1965. (The dashed line in the upper diagram is the mean for 1956-64.)

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$),
1965 ($35^{\circ}05.3' N.$, $75^{\circ}19.7' W.$; water depth: 53 meters)

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	53 m.	0 m.	53 m.
January								
1	11.5	11.5	11.6	12.3	12.3	12.3	32.82	
2	11.5	11.4	11.3	12.6	14.6	(15.0)	32.67	
3	-	-	-	-	-	-	-	
4	10.6	-	-	-	-	-	32.61	
5	10.9	11.3	12.0	13.9	12.7	12.7	32.64	
6	10.7	10.9	11.3	15.7	14.9	14.9	32.32	
7	11.2	11.3	11.4	11.8	12.1	-	33.03	
8	21.4	21.7	21.7	19.5	16.6	-	36.13	
9	-	-	-	-	-	-	-	
10	11.8	12.1	13.6	18.8	19.0	-	32.82	
11	12.2	-	-	-	-	-	32.63	
12	10.0	-	-	-	-	-	36.67	
13	23.8	23.8	23.1	17.0	16.5	(16.4)	36.23	
14	14.2	16.0	17.8	19.6	20.2	(20.2)	33.67	
15	21.7	-	-	-	-	-	36.23	
16	12.2	-	-	-	-	-	34.69	
17	-	-	-	-	-	-	31.83	
18	8.3	-	-	-	-	-	32.82	
19	8.0	8.0	8.0	9.1	9.6	9.6	31.85	
20	8.7	10.9	13.8	9.4	10.8	(10.9)	31.98	
21	9.0	9.0	9.2	11.8	15.9	(15.7)	32.66	
22	9.9	10.7	11.6	16.5	15.7	15.7	32.57	
23	11.4	11.9	14.3	18.1	15.2	14.8	32.90	35.58
24	11.1	-	-	-	-	-	33.03	
25	-	-	-	-	-	-	-	
26	14.4	14.6	14.7	15.0	15.2	-	34.07	
27	12.5	14.1	15.5	15.2	15.9	(15.6)	33.40	
28	-	-	-	-	-	-	33.74	
29	12.2	-	-	-	-	-	33.69	
30	13.3	-	-	-	-	-	33.63	
31	-	-	-	-	-	-	-	
Mean	12.5	13.1	13.8	14.8	14.8	(14.5)	33.46	

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
1965 ($35^{\circ}05.3' N.$, $75^{\circ}19.7' W.$; water depth: 53 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	53 m.	0 m.	53 m.
February								
1	8.7	8.9	9.4	11.2	11.8	12.0	32.15	
2	9.3	9.7	10.4	12.0	13.6	13.5	32.23	
3	7.3	8.1	11.2	17.1	17.4	-	-	
4	8.3	-	-	-	-	-	32.71	
5	18.2	18.1	18.1	18.1	16.9	(16.9)	36.24	
6	9.0	19.8	19.7	19.9	19.0	-	36.14	
7	7.8	7.3	7.2	16.3	16.9	-	32.10	
8	-	-	-	-	-	-	31.12	
9	10.9	11.1	13.1	15.0	15.5	-	-	
10	15.0	15.5	15.7	15.5	15.7	-	34.36	
11	11.2	12.1	12.5	13.4	16.1	-	33.54	
12	8.4	8.0	8.0	8.1	12.4	-	33.00	
13	-	-	-	-	-	-	-	
14	8.3	-	-	-	-	-	32.62	
15	7.2	-	-	-	-	-	32.46	
16	8.3	7.8	7.8	7.9	-	-	32.34	
17	7.2	7.3	7.4	8.1	8.4	-	32.24	
18	7.6	7.6	7.9	8.0	11.2	(11.2)	31.50	
19	8.9	-	-	-	-	-	32.13	
20	6.7	-	-	-	-	-	32.45	
21	7.2	-	-	-	-	-	32.52	
22	8.0	8.0	7.9	7.0	11.1	-	32.62	
23	7.1	7.2	7.6	10.3	12.3	(13.0)	32.32	
24	7.2	-	-	-	-	-	32.20	
25	-	-	-	-	-	-	-	
26	-	-	-	-	-	-	-	
27	9.3	9.9	11.7	12.5	14.5	-	32.75	
28	10.3	13.2	17.0	16.7	14.7	-	32.06	
29								
30								
31								
Mean	9.1	10.6	11.4	12.8	14.2	-	32.77	

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$),
 1965 ($35^{\circ}05.3' N.$, $75^{\circ}19.7' W.$; water depth: 53 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	53 m.	0 m.	53 m.
March								
1	9.8	9.8	12.3	14.0	13.0	(12.5)	31.53	
2	10.5	10.6	10.6	11.4	12.3	-	33.76	
3	-	-	-	-	-	-	34.02	
4	-	-	-	-	-	-	34.60	
5	-	-	-	-	-	-	34.82	
6	8.2	8.1	8.1	10.0	-	-	32.36	
7	-	-	-	-	-	-	-	
8	7.0	7.0	7.1	7.2	7.8	-	32.65	
9	7.2	7.0	7.0	8.2	13.1	(13.2)	32.70	
10	7.9	7.7	7.5	9.5	12.2	(12.8)	31.93	
11	7.8	-	-	-	-	-	32.68	
12	7.0	7.0	7.1	8.5	8.8	(9.0)	32.71	
13	7.2	7.2	7.2	7.6	11.0	(10.5)	32.62	
14	7.2	6.9	6.9	7.1	9.9	-	32.58	
15	8.3	8.8	9.3	11.2	11.9	-	32.53	
16	8.0	8.0	8.0	8.5	9.6	-	32.22	
17	-	-	-	-	-	-	32.44	
18	8.8	8.3	8.7	11.8	12.3	-	31.42	
19	7.8	7.9	8.0	8.0	8.0	-	32.52	
20	7.2	-	-	-	-	-	32.72	
21	6.9	7.0	7.0	6.9	-	-	32.54	
22	7.8	7.3	7.4	7.6	7.8	(7.8)	31.46	
23	8.5	8.0	7.9	7.9	7.9	-	31.71	
24	9.8	8.2	8.0	12.7	15.1	(15.1)	30.93	
25	9.4	-	-	-	-	-	31.15	
26	8.4	8.0	8.0	8.1	10.3	-	32.36	
27	8.3	-	-	-	-	-	32.38	
28	8.5	8.1	8.0	7.9	7.8	-	32.52	
29	8.8	7.9	8.0	8.7	10.1	-	32.93	
30	7.8	-	-	-	-	-	32.44	
31	7.2	-	-	-	-	-	-	
Mean	8.1	7.9	8.1	9.1	10.5	-	32.53	

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$),
1965 (35°05.3' N., 75°19.7' W.; water depth: 53 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	18 m.	30 m.	48 m.	53 m.	0 m.	53 m.
April								
1	7.3	7.3	7.1	7.0	-	-	32.75	
2	9.3	9.3	9.1	9.7	-	-	32.12	
3	7.8	-	-	-	-	-	32.00	
4	8.3	8.3	8.3	8.0	8.3	-	31.23	
5	8.3	8.2	8.0	(7.7)	-	-	31.90	
6	9.5	9.3	9.1	9.5	10.0	-	31.79	
7	8.3	7.1	6.0	6.2	-	-	30.92	
8	10.5	10.4	9.8	9.7	10.0	-	31.50	
9	13.8	15.6	19.5	19.0	15.5	(15.2)	31.09	
10	8.5	8.1	8.1	-	-	-	31.53	
11	10.5	10.5	10.7	10.8	14.9	-	31.03	
12	12.2	-	-	-	-	-	31.70	
13	11.1	11.5	12.7	12.6	21.1	-	31.68	
14	11.1	-	-	-	-	-	31.05	
15	18.0	18.0	17.2	16.9	16.5	(16.6)	31.19	
16	16.0	22.0	21.7	21.0	21.0	-	31.70	
17	10.0	-	-	-	-	-	31.31	
18	12.4	13.0	13.8	13.5	16	-	31.71	
19	14.3	13.8	14.0	13.6	20	-	31.05	
20	15.6	-	-	-	-	-	31.41	
21	18.3	18.3	16.1	16.1	16.3	16.4	30.66	
22	22.9	22.5	22.2	22.2	23.7	-	30.39	
23	17.0	21.6	19.0	19.0	18.3	(18.3)	31.56	
24	16.7	-	-	-	-	-	31.38	
25	14.4	-	-	-	-	-	31.00	
26	-	-	-	-	-	-	31.18	
27	14.4	-	-	-	-	-	31.54	
28	13.3	-	-	-	-	-	31.90	
29	13.3	12.5	11.9	-	-	-	31.26	
30	13.3	13.1	10.0	(10.0)	10.0	-	31.41	
31								
Mean	12.7	13.0	13.6	13.0	17.0	-	32.45	

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
1965 ($35^{\circ}05.3' N.$, $75^{\circ}19.7' W.$; water depth: 53 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	53 m.	0 m.	53 m.
May								
1	15.0	13.1	12.1	20.2	18.4	-	31.11	
2	14.2	15.2	20.3	19.8	19.0	(19.0)	31.13	
3	15.7	18.0	20.4	21.8	20.0	(19.7)	31.66	
4	16.2	20.0	20.8	20.6	19.6	(19.4)	32.04	
5	15.7	18.6	20.4	20.0	19.5	(19.2)	31.52	
6	17.0	17.7	18.0	19.2	19.7	(19.4)	32.52	
7	14.4	-	-	-	-	-	35.38	
8	19.2	19.4	19.9	19.3	19.3	-	33.42	
9	14.5	13.0	12.9	16.2	18.3	-	35.22	
10	20.0	22.6	23.2	21.2	19.8	-	-	
11	20.6	21.3	22.0	20.9	18.5	(18.5)	33.47	
12	17.5	17.7	17.9	20.1	18.1	(17.6)	30.27	
13	18.5	18.5	20.1	20.1	19.2	(20.0)	31.22	
14	19.9	22.1	23.9	21.9	20.0	(19.9)	34.28	
15	20.1	22.0	22.2	17.0	19.8	-	33.92	35.62
16	19.0	22.3	23.2	23.1	20.1	(19.8)	31.59	
17	21.0	22.2	23.3	22.0	19.9	19.6	34.24	
18	19.6	21.2	21.6	20.1	19.7	-	32.17	
19	20.5	20.3	20.8	21.0	20.1	19.1	33.46	
20	21.4	20.9	21.3	21.0	20.6	-	34.48	
21	20.9	21.2	22.0	22.0	20.7	-	32.94	
22	20.6	22.3	24.1	21.5	20.7	20.4	32.93	34.48
23	25.2	25.0	24.8	22.4	21.0	-	35.61	
24	23.6	24.9	25.2	23.8	20.9	-	33.22	
25	24.9	23.3	23.4	23.2	23.1	-	35.43	
26	20.5	22.3	23.1	22.9	20.1	-	32.77	
27	24.1	24.7	24.8	22.0	18.8	-	34.57	
28	23.1	23.3	24.1	20.1	17.5	(17.5)	34.10	
29	22.3	23.8	23.1	20.3	16.8	(16.7)	33.73	33.94
30	23.2	23.0	22.5	21.3	19.4	(19.0)	33.95	
31	23.1	24.1	23.6	21.2	20.4	-	34.16	
Mean	19.7	20.8	21.5	20.9	19.6	19.0	33.22	34.68

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$),
 1965 ($35^{\circ}05.3' N.$, $75^{\circ}19.7' W.$; water depth: 53 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	53 m.	0 m.	53 m.
June								
1	24.4	-	-	-	-	-	34.23	
2	24.3	23.6	23.5	22.1	19.4	(19.1)	34.78	
3	25.3	25.3	25.3	22.3	-	-	36.15	
4	25.6	-	-	-	-	-	36.20	
5	25.0	23.9	22.9	23.2	21.2	(20.4)	35.78	36.46
6	23.9	-	-	-	-	-	35.51	
7	25.0	24.1	24.1	22.0	18.9	18.2	35.80	
8	26.0	24.5	24.3	21.0	18.2	17.9	35.93	
9	25.3	25.1	25.0	22.0	16.1	(16.1)	35.86	
10	25.6	25.4	24.5	17.9	15.7	(15.6)	35.37	
11	24.1	24.1	24.0	21.2	15.5	(15.1)	35.57	
12	24.4	24.4	23.5	21.7	18.2	16.7	34.88	35.40
13	24.5	24.5	24.6	23.1	18.4	-	35.44	
14	24.4	24.4	24.2	21.9	19.6	18.5	35.34	
15	22.7	22.7	21.6	18.6	16.8	16.3	34.71	
16	21.1	17.9	16.1	14.4	12.7	12.5	33.05	
17	17.5	17.4	17.3	15.5	14.3	14.3	31.88	
18	18.0	17.6	17.3	16.2	14.8	14.5	31.62	
19	17.8	16.9	16.0	12.9	8.3	8.3	31.11	33.04
20	19.5	19.4	19.6	19.6	11.2	10.9	31.78	
21	22.1	21.0	20.9	18.2	14.3	14.2	31.53	
22	21.7	20.5	21.1	19.3	18.1	(17.8)	31.23	
23	22.6	21.6	-	17.6	13.7	(13.7)	31.79	
24	24.4	-	-	-	-	-	31.55	
25	23.9	24.0	24.7	23.3	-	-	32.77	
26	24.2	22.1	20.9	20.2	19.6	18.5	33.97	34.08
27	22.0	20.7	19.5	20.1	19.8	19.3	33.01	
28	23.9	19.7	18.9	21.5	16.8	15.2	30.89	
29	25.0	20.8	17.3	20.3	16.3	(16.2)	31.03	
30	22.4	25.9	26.2	21.9	17.3	(17.2)	32.69	
31								
Mean	23.2	22.2	21.7	19.9	16.5	15.9	33.72	34.74

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$),
1965 ($35^{\circ}05.3' N.$, $75^{\circ}19.7' W.$; water depth: 53 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	53 m.	0 m.	53 m.
July								
1	25.0	25.0	25.0	23.6	18.1	17.5	34.27	
2	21.1	18.3	16.5	16.0	16.6	-	31.75	
3	25.5	26.7	27.0	17.4	15.8	-	34.33	34.82
4	25.5	26.6	25.8	22.4	16.7	-	34.06	
5	23.4	24.9	27.4	24.9	-	-	31.11	
6	23.8	25.8	26.4	25.6	20.7	-	31.61	
7	27.9	28.0	27.6	26.8	21.9	-	36.02	
8	26.4	26.7	26.5	21.8	19.0	-	35.00	
9	25.8	26.0	26.7	20.1	17.2	(19.0)	33.80	
10	26.3	26.1	24.8	18.7	15.8	-	34.28	36.94
11	26.1	-	-	-	-	-	34.44	
12	26.7	26.2	26.3	24.3	15.0	-	34.91	
13	26.5	26.2	26.3	-	-	-	34.37	
14	26.9	26.8	26.3	25.6	25.7	-	34.43	
15	27.4	27.3	27.3	26.6	21.0	-	35.20	
16	27.4	27.2	27.2	24.1	21.3	-	35.86	
17	28.0	27.3	27.0	23.8	21.8	-	35.52	36.20
18	27.6	27.3	27.2	25.4	21.8	-	34.83	
19	27.4	27.2	28.4	24.7	20.9	-	34.82	
20	27.4	27.7	26.6	22.6	21.9	-	35.08	
21	-	-	-	-	-	-	35.77	
22	27.2	27.3	27.4	27.1	24.9	19.9	36.13	
23	28.4	28.2	28.1	25.9	21.5	-	35.94	
24	26.7	25.4	23.2	20.0	17.1	-	35.89	36.21
25	26.8	26.7	25.9	19.9	16.2	-	35.36	
26	26.3	26.2	26.2	26.1	19.7	-	35.32	
27	25.9	25.9	25.8	26.0	24.8	-	35.72	
28	26.0	26.2	26.3	26.6	26.8	-	35.68	
29	28.5	28.3	28.5	21.7	21.8	-	36.18	
30	27.3	27.7	27.6	24.3	20.2	-	35.72	
31	27.0	27.0	27.0	26.2	25.3	-	35.69	
Mean	26.4	26.4	26.3	23.5	20.4	-	34.81	36.04

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
 1965 ($35^{\circ}05.3' N.$, $75^{\circ}19.7' W.$; water depth: 53 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	53 m.	0 m.	53 m.
August								
1	27.8	27.5	27.5	26.6	21.6	-	36.21	
2	27.0	27.0	26.4	21.1	19.7	-	36.05	
3	27.8	26.5	26.3	24.1	19.1	-	36.34	
4	27.2	27.1	27.1	27.1	20.2	-	35.64	
5	27.4	27.1	27.2	24.5	20.9	-	35.97	
6	27.0	26.3	26.5	26.3	21.6	-	35.97	
7	28.0	27.9	27.2	25.0	21.5	-	35.80	36.27
8	27.8	27.8	26.1	20.4	19.4	-	36.08	
9	27.0	27.3	27.3	26.3	19.6	-	35.79	
10	27.0	27.0	27.0	22.4	17.0	-	35.60	
11	27.1	27.0	27.1	23.7	16.3	-	35.62	
12	26.6	26.2	26.1	22.7	17.6	-	35.74	
13	27.3	26.9	26.1	22.2	17.5	-	36.17	
14	26.6	25.8	25.7	23.7	17.0	-	35.41	36.08
15	27.0	27.0	27.0	25.8	22.0	-	35.54	
16	27.8	27.7	27.3	23.7	22.3	-	36.10	
17	27.8	27.5	27.3	-	-	-	36.13	
18	27.8	27.5	27.3	23.5	19.6	-	35.92	
19	27.4	27.3	27.2	25.9	20.8	-	35.73	
20	27.3	26.9	26.7	26.0	23.3	-	35.87	
21	27.4	27.5	27.1	28.8	22.9	-	36.31	36.37
22	28.3	27.3	26.7	25.0	22.1	-	35.72	
23	26.3	26.2	26.2	24.0	20.5	-	36.15	
24	28.3	27.6	26.9	24.9	23.4	-	35.14	
25	27.7	27.8	27.9	24.8	20.1	-	34.84	
26	27.8	27.8	27.1	22.4	18.0	-	35.86	
27	26.7	27.0	27.0	22.6	19.1	-	-	
28	27.2	26.8	26.8	22.1	17.6	-	35.41	36.21
29	26.1	-	-	-	-	-	35.46	
30	27.0	27.1	27.2	23.7	21.0	-	36.22	
31	27.2	27.2	27.2	24.9	22.0	-	35.86	
Mean	27.3	27.1	26.9	24.3	20.1	-	35.82	36.23

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/\text{oo}$),
 1965 ($35^{\circ}05.3'$ N., $75^{\circ}19.7'$ W.; water depth: 53 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	53 m.	0 m.	53 m.
September								
1	27.3	27.0	27.1	24.4	22.2	-	35.59	
2	26.8	26.8	25.7	-	-	-	35.94	
3	27.3	27.3	27.2	26.3	24.7	-	35.83	
4	-	-	-	-	-	-	-	
5	-	-	-	-	-	-	-	
6	-	-	-	-	-	-	-	
7	27.7	27.7	27.5	24.7	-	-	36.25	
8	27.2	29.5	30.1	-	-	-	34.71	
9	28.1	27.9	27.9	27.1	-	-	36.24	
10	28.0	27.8	27.4	26.4	-	-	36.31	
11	28.7	28.2	28.1	27.5	-	-	36.34	
12	27.0	26.9	26.9	26.6	-	-	36.06	36.33
13	28.4	28.1	27.9	27.6	-	-	36.36	
14	28.0	26.7	26.4	25.4	-	-	36.34	
15	26.0	27.1	27.2	26.9	-	-	36.78	
16	28.5	28.5	28.4	27.8	-	-	34.96	
17	27.5	27.3	27.3	25.4	-	-	36.37	
18	27.9	27.5	27.5	27.3	-	-	36.13	36.34
19	27.6	27.0	26.9	26.9	-	-	36.12	
20	27.0	27.0	27.0	26.6	-	-	35.00	
21	29.4	28.9	28.5	27.0	26.1	(26.1)	36.24	
22	27.8	27.0	26.0	25.3	-	-	36.35	
23	28.3	28.0	27.9	27.0	24.1	-	36.35	
24	28.3	-	-	-	-	-	36.39	
25	27.7	27.9	27.8	27.7	24.4	-	36.50	36.33
26	27.0	27.0	27.0	26.1	26.1	-	36.47	
27	27.1	27.1	27.1	27.1	26.4	-	36.33	
28	25.0	25.0	25.1	25.9	26.2	(26.2)	34.96	
29	23.2	23.0	23.2	24.2	25.4	(26.2)	33.05	
30	24.0	24.0	24.9	26.0	26.5	(26.5)	34.04	
31								
Mean	27.3	27.2	27.1	26.4	-	-	35.85	36.33

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
 1965 ($35^{\circ}05.3' N.$, $75^{\circ}19.7' W.$; water depth: 53 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	53 m.	0 m.	53 m.
October								
1	23.5	23.9	23.9	-	-	-	36.41	
2	26.2	26.2	26.2	26.0	23.0	-	35.90	
3	25.3	25.6	26.2	26.0	23.2	-	35.04	
4	23.2	23.4	23.7	24.3	25.1	(25.0)	34.28	
5	22.2	22.4	23.3	24.2	23.3	-	34.74	
6	22.2	22.6	22.0	21.6	21.7	-	34.09	
7	25.6	-	-	--	-	-	36.09	
8	25.6	-	-	-	-	-	-	
9	24.9	24.9	24.9	24.9	-	-	36.16	36.13
10	25.1	25.1	25.1	24.7	23.8	-	36.38	
11	25.6	-	-	-	-	-	36.26	
12	25.6	-	-	-	-	-	36.39	
13	25.6	-	-	-	-	-	36.44	
14	25.9	25.9	25.7	24.1	23.7	-	36.30	
15	25.7	25.9	25.9	24.1	22.0	-	36.22	
16	25.8	25.8	25.8	24.5	23.3	-	35.94	36.34
17	26.7	-	-	-	-	-	34.46	
18	25.7	25.3	25.2	25.2	-	-	36.19	
19	25.7	25.7	25.7	25.2	24.0	-	36.27	
20	25.6	-	-	-	-	-	36.37	
21	25.6	-	-	-	-	-	36.27	
22	21.5	24.2	26.1	25.7	24.0	-	-	
23	22.7	24.9	25.0	24.6	(23.0)	-	-	36.32
24	20.7	21.0	21.7	22.6	21.5	-	35.37	
25	20.4	20.4	20.9	21.6	23.9	-	33.11	
26	26.0	26.0	25.8	24.0	23.9	-	36.39	
27	22.2	-	-	-	-	-	34.75	
28	22.2	24.0	24.0	23.8	23.0	-	34.69	
29	20.6	-	-	-	-	-	-	
30	22.6	22.7	22.7	22.9	23.1	(23.1)	-	35.35
31	23.3	24.1	23.2	22.1	22.1	22.1	35.51	
Mean	24.2	24.3	24.4	24.1	23.2	-	35.62	36.04

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$), 1965 ($35^{\circ}05.3'$ N., $75^{\circ}19.7'$ W.; water depth: 53 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	53 m.	0 m.	53 m.
November								
1	24.2	24.4	24.6	24.4	24.1	-	36.48	
2	24.4	-	-	-	-	-	36.36	
3	25.0	24.4	24.0	23.2	23.3	-	36.24	
4	23.9	23.1	22.5	22.1	22.0	-	36.26	
5	23.6	23.5	23.0	21.4	21.0	-	-	
6	22.5	22.6	22.6	21.9	17.0	-	36.42	36.07
7	25.5	25.5	25.5	25.5	24.9	-	36.61	
8	25.5	25.5	25.4	23.3	(22.0)	-	36.24	
9	22.3	22.8	23.9	23.5	21.5	-	36.03	
10	21.8	21.9	21.9	22.0	22.1	-	36.31	
11	23.9	24.0	24.1	24.0	23.4	-	36.28	
12	24.9	24.9	24.4	22.3	21.8	-	36.22	
13	17.0	17.0	17.1	17.6	22.1	-	33.24	36.24
14	21.3	21.4	21.4	21.3	19.7	-	35.37	
15	25.0	25.0	25.0	25.0	23.7	-	36.27	
16	24.4	24.7	24.8	24.5	23.7	-	36.19	
17	23.2	23.4	23.5	22.1	18.7	-	36.29	
18	20.9	21.0	20.9	20.6	20.1	-	36.47	
19	18.8	19.0	19.4	22.6	21.3	-	34.52	
20	16.5	17.2	18.6	18.5	(18.5)	-	34.58	35.70
21	20.0	20.0	18.3	17.4	-	-	36.48	
22	21.1	21.0	20.7	19.9	-	-	36.47	
23	21.2	21.2	21.1	20.6	-	-	36.60	
24	19.6	20.0	19.5	17.2	-	-	36.41	
25	17.5	18.0	18.9	18.7	-	-	34.91	
26	23.3	23.2	22.9	22.3	-	-	36.38	
27	24.4	-	-	-	-	-	36.49	
28	22.5	22.3	21.6	20.8	-	-	-	36.26
29	20.6	20.7	20.5	-	-	-	36.46	
30	20.8	21.2	21.2	-	-	-	36.45	
31								
Mean	22.2	22.1	22.0	21.6	-	-	36.04	36.07

Table 13.--Diamond Shoal Lightship: temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$),
 1965 ($35^{\circ}05.3' N.$, $75^{\circ}19.7' W.$; water depth: 53 meters)--Continued

Month and day	Temperature at depth of--						Salinity at depth of--	
	0 m.	9 m.	15 m.	30 m.	46 m.	53 m.	0 m.	53 m.
December								
1	21.3	21.4	21.3	20.5	-	-	36.59	
2	16.4	16.8	17.6	17.9	(20.0)	-	34.37	
3	23.5	23.5	23.5	20.0	(19.9)	-	36.41	
4	23.0	23.0	23.0	18.1	-	-	36.40	36.15
5	20.8	20.9	20.9	20.9	-	-	36.42	
6	20.0	20.1	20.1	19.5	-	-	36.24	
7	22.2	22.8	22.7	22.2	(19.4)	-	36.55	
8	20.6	-	-	-	-	-	36.48	
9	14.5	14.5	14.7	13.9	-	-	34.14	
10	23.7	23.5	23.7	21.9	-	-	36.58	
11	23.1	23.1	23.1	20.4	(20.2)	-	36.47	35.75
12	22.5	22.5	22.4	22.0	(21.6)	-	36.36	
13	13.9	13.8	13.8	15.2	-	-	33.12	
14	13.2	20.4	21.1	20.7	-	-	33.14	
15	13.3	13.2	13.2	13.2	-	-	33.46	
16	13.0	13.0	13.0	14.0	(14.0)	-	33.03	
17	12.2	12.2	12.2	12.6	-	-	32.82	
18	12.3	12.3	12.4	12.4	-	-	33.16	33.13
19	22.2	19.4	16.3	15.7	-	-	35.97	
20	12.0	11.9	11.9	11.9	(11.9)	-	32.96	
21	11.6	11.7	11.7	14.2	-	-	32.86	
22	22.5	22.3	21.0	19.0	-	-	36.34	
23	16.0	20.9	21.3	21.2	-	-	32.75	
24	20.0	22.5	22.2	-	-	-	36.38	
25	21.7	-	-	-	-	-	-	
26	14.4	-	-	-	-	-	-	
27	12.5	12.5	12.5	12.7	-	-	34.92	
28	23.0	23.0	23.0	19.9	-	-	36.37	
29	22.6	22.4	22.3	21.7	-	-	36.36	
30	21.7	21.7	21.1	20.1	-	-	36.55	
31	24.1	24.1	23.4	20.8	-	-	36.52	
Mean	18.5	18.9	18.8	17.9	-	-	35.16	35.01

Frying Pan Shoals Light Station (fig. 14, table 14)

Surface water temperatures and air temperatures were near normal in all seasons. However, a small trend toward below normal water temperatures early in the year and above normal water temperatures later is apparent (cf. Diamond Shoal Lightship). There was a record low in late July.

Observations of bottom temperature were incomplete but record lows were recorded for late August and early October.

The minimum decadal surface salinity came in early May. Salinity was below normal in all decades through mid-June and above normal in all decades from mid-September through December (cf. Diamond Shoal Lightship).

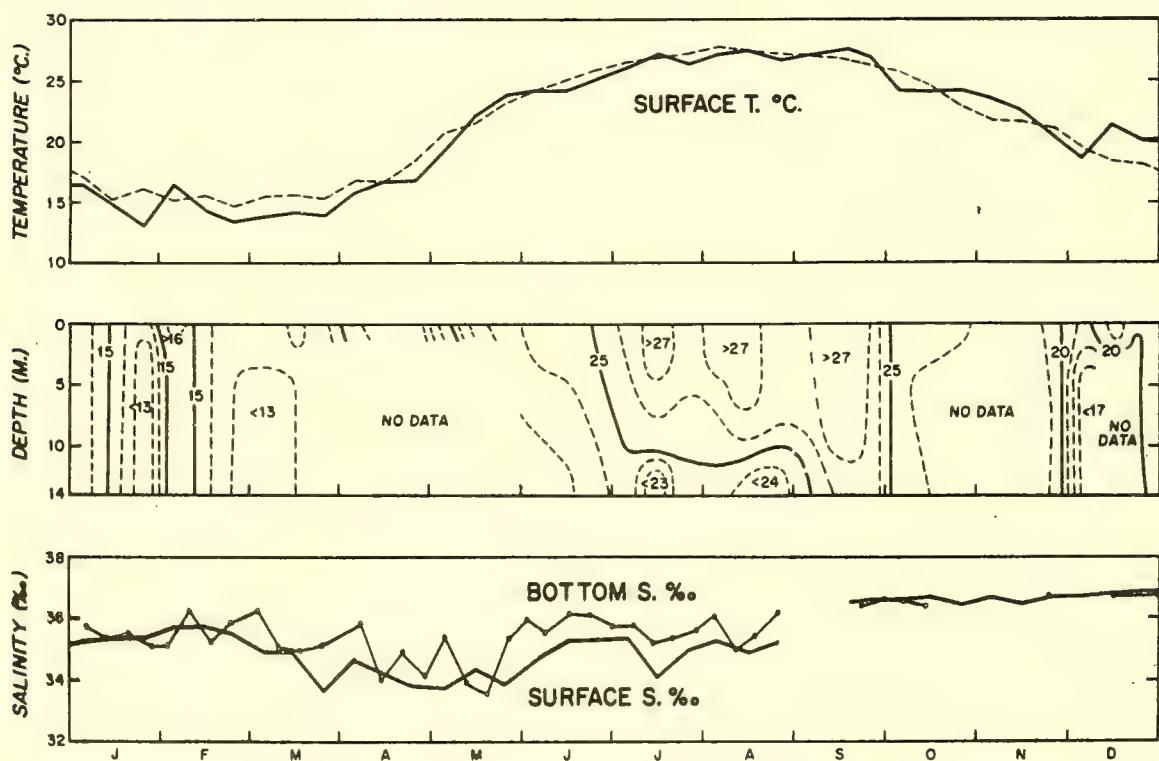


Figure 14.--Frying Pan Shoals Light Station, 1965. (The dashed line in upper diagram is the mean for 1956-64.)

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$),
 1965 ($33^{\circ} 29.0' N.$, $75^{\circ} 35.5' W.$; water
 depth: 14 meters)

Month and day	Temperature at depth of--			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
January					
1	16.7	16.6	16.6	-	
2	17.3	17.3	17.3	35.37	
3	16.1	-	-	35.69	
4	17.3	17.3	17.3	34.99	
5	17.2	-	-	35.90	
6	16.3	16.3	16.3	35.68	35.74
7	16.1	-	-	34.79	
8	15.1	15.1	-	34.92	
9	15.7	15.7	-	35.27	
10	17.6	17.6	-	34.43	
11	14.1	14.1	-	34.33	
12	17.7	17.6	-	34.40	
13	17.2	17.1	-	35.01	35.39
14	16.9	16.9	-	35.67	
15	14.9	14.8	-	35.98	
16	14.1	14.1	-	35.87	
17	13.6	13.6	-	35.72	
18	13.3	13.3	-	35.57	
19	13.0	13.0	-	35.57	
20	13.5	13.4	(13.4)	35.57	35.47
21	14.3	14.2	-	36.07	
22	13.8	13.7	(13.7)	35.83	
23	16.1	-	-	36.08	
24	13.4	13.3	(13.3)	35.80	
25	12.8	12.9	-	35.20	
26	11.5	11.3	12.3	34.92	
27	12.1	12.1	12.1	34.84	35.09
28	10.9	11.7	-	34.49	
29	13.0	13.0	-	34.71	
30	13.7	13.7	-	36.04	
31	12.0	12.0	-	35.20	
Mean	14.8	14.5	-	35.33	35.42

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$),
 1965 ($33^{\circ} 29.0' N.$, $75^{\circ} 35.5' W.$; water
 depth: 14 meters)--Continued

Month and day	Temperature at depth of-			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
February					
1	12.5	12.4	(12.4)	35.14	
2	13.2	13.1	(12.9)	35.24	
3	12.0	12.0	12.0	35.27	35.13
4	11.7	11.6	(11.6)	35.27	
5	18.2	13.2	(13.0)	35.16	
6	19.9	18.7	(18.6)	36.30	
7	17.8	-	-	35.58	
8	18.4	18.3	18.3	36.14	
9	19.3	18.4	18.4	35.92	
10	20.6	19.3	19.2	36.39	36.25
11	19.2	18.6	18.5	36.22	
12	19.3	18.8	18.5	36.18	
13	17.7	15.6	(15.5)	35.64	
14	14.7	14.9	14.9	36.05	
15	9.1	9.0	9.0	34.80	
16	13.3	13.3	13.3	35.33	
17	10.7	10.7	10.7	35.56	35.23
18	14.5	-	-	35.75	
19	12.9	12.9	12.9	35.87	
20	13.0	-	-	-	
21	15.4	15.2	(14.6)	36.00	
22	12.2	12.2	12.2	35.86	
23	11.3	11.2	11.1	35.48	
24	15.7	15.6	15.6	35.77	35.82
25	15.4	-	-	36.06	
26	13.5	13.4	13.4	34.97	
27	10.5	10.4	(10.4)	34.26	
28	13.3	13.1	13.1	34.96	
29					
30					
31					
Mean	14.8	14.2	14.2	35.60	35.61

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{o}/oo$),
 1965 ($33^{\circ} 29.0' N.$, $75^{\circ} 35.5' W.$; water
 depth: 14 meters)--Continued

Month and day	Temperature at depth of--			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
March					
1	15.5	-	-	35.69	
2	16.7	-	-	35.17	
3	12.5	12.4	(12.4)	34.26	36.20
4	15.0	-	-	34.55	
5	12.0	12.0	-	36.20	
6	12.9	(12.9)	-	36.18	
7	13.3	13.1	-	33.77	
8	13.4	13.3	13.2	33.97	
9	13.3	13.2	13.0	34.43	
10	13.0	13.0	13.0	34.11	35.02
11	12.9	12.9	12.9	33.86	
12	13.0	13.1	13.1	34.31	
13	13.0	13.0	13.0	34.70	
14	13.2	13.0	13.0	35.44	
15	12.4	12.5	(12.6)	35.82	
16	13.5	-	-	34.81	
17	16.4	-	-	35.16	34.90
18	19.0	-	-	36.29	
19	16.0	-	-	34.29	
20	13.0	-	-	34.31	
21	8	-	-	34.13	
22	12	-	-	34.42	
23	14	-	-	34.46	
24	15	-	-	33.62	35.16
25	17	-	-	33.27	
26	15.6	-	-	33.32	
27	14.1	-	-	31.88	
28	14.0	-	-	33.44	
29	16.6	-	-	33.82	
30	13	-	-	34.13	
31	-	-	-	-	
Mean	14.0	-	-	34.46	35.32

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{^{\circ}}/\text{oo}$),
 1965 ($33^{\circ}29.0' \text{ N.}$, $75^{\circ}35.5' \text{ W.}$; water
 depth: 14 meters)--Continued

Month and day	Temperature at depth of--			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
April					
1	15	-	-	35.21	
2	11	-	-	34.19	
3	12.9	-	-	33.90	
4	15	-	-	34.62	
5	15	-	-	34.74	
6	22	-	-	35.13	
7	16.5	-	-	35.64	35.80
8	15.5	-	-	33.99	
9	18.0	-	-	34.69	
10	16.0	-	-	33.94	
11	15.5	-	-	34.30	
12	16.0	-	-	34.49	
13	17.0	-	-	34.79	
14	15.0	-	-	33.84	33.99
15	16.0	-	-	34.03	
16	19.0	-	-	34.23	
17	18.0	-	-	34.14	
18	16.0	-	-	33.73	
19	17.5	-	-	33.88	
20	17.0	-	-	33.62	
21	13	-	-	33.64	34.89
22	17	-	-	33.79	
23	17.5	-	-	34.05	
24	18	-	-	34.06	
25	17.5	-	-	33.73	
26	17.0	-	-	33.86	
27	-	-	-	33.59	
28	18.6	-	-	34.12	34.07
29	16.2	-	-	33.36	
30	-	-	-	-	
31					
Mean	15.3	-	-	34.18	34.69

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$),
 1965 ($33^{\circ} 29.0' N.$, $75^{\circ} 35.5' W.$; water
 depth: 14 meters)--Continued

Month and day	Temperature at depth of-			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
May					
1	17.0	-	-	33.58	
2	17.6	-	-	33.54	
3	18.5	-	-	33.35	
4	18.0	-	-	33.23	
5	20.0	-	-	33.54	35.39
6	20.0	-	-	33.96	
7	21.0	-	-	34.28	
8	20.0	-	-	34.17	
9	20.0	-	-	34.96	
10	22.0	-	-	33.29	
11	23.0	-	-	33.54	
12	22.0	-	-	33.86	33.88
13	21.0	-	-	34.16	
14	22.0	-	-	34.40	
15	22.0	-	-	34.72	
16	22.0	-	-	34.65	
17	22.0	-	-	34.38	
18	21.5	-	-	34.60	
19	22.1	-	-	34.28	33.55
20	23.0	-	-	34.49	
21	23.4	-	-	33.86	
22	23.5	-	-	33.61	
23	24.3	-	-	33.12	
24	25.0	-	-	33.41	
25	24.7	-	-	33.23	
26	24.6	-	-	33.40	35.35
27	24.0	-	-	33.88	
28	24.0	-	-	33.99	
29	24.0	-	-	34.40	
30	22.8	-	-	34.85	
31	22.5	-	-	34.66	
Mean	21.9	-	-	33.98	34.54

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$),
 1965 ($33^{\circ} 29.0' N.$, $75^{\circ} 35.5' W.$; water
 depth: 14 meters)--Continued

Month and day	Temperature at depth of--			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
June					
1	24.5	-	-	34.40	
2	25.0	23.1	22.2	34.23	35.92
3	24.8	22.5	-	33.93	
4	22.8	22.8	22.8	34.56	
5	22.8	22.7	22.7	35.21	
6	23.7	22.9	22.6	35.31	
7	24	-	-	34.83	
8	24.0	23.0	-	34.53	
9	25.0	23.2	23.0	34.68	35.49
10	24.5	23.4	23.4	34.82	
11	25.0	22.9	(22.9)	35.05	
12	24.0	23.3	22.9	34.71	
13	23.5	22.9	22.0	35.09	
14	25.0	-	-	35.16	
15	24.3	22.9	22.9	35.37	
16	23.9	23.1	22.2	35.39	36.12
17	24.0	23.2	22.4	35.41	
18	24.1	-	-	35.17	
19	24.1	23.8	23.6	35.37	
20	24.5	23.8	23.7	35.47	
21	23.5	-	-	35.28	
22	24.7	23.9	23.8	35.36	
23	25.0	23.3	23.3	35.06	36.02
24	25.0	24.4	22.3	34.82	
25	24.2	-	-	34.81	
26	25.0	-	-	34.98	
27	25.3	24.2	(23.8)	35.05	
28	26.3	24.6	23.6	36.26	
29	26.5	24.1	23.9	35.63	
30	25.0	25.0	25.0	35.70	35.67
31					
Mean	24.5	23.4	23.1	35.05	35.84

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$),
 1965 ($33^{\circ}29.0' N.$, $75^{\circ}35.5' W.$; water
 depth: 14 meters)--Continued

Month and day	Temperature at depth of--			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
July					
1	25.1	25.1	25.1	35.71	
2	25.2	25.1	25.1	35.92	
3	25.7	24.3	24.1	35.96	
4	25.5	24.7	24.4	35.97	
5	26.1	25.3	25.2	35.69	
6	26.5	25.5	25.3	35.10	
7	26.7	25.5	25.5	35.24	35.74
8	26.8	25.7	25.7	35.15	
9	26.9	25.5	25.3	34.66	
10	26.4	24.0	24.0	34.32	
11	27.4	24.6	23.6	33.99	
12	26.5	25.9	22.7	33.90	
13	27.4	26.8	23.3	33.93	
14	27.1	25.8	23.6	35.16	35.16
15	26.8	26.3	-	33.96	
16	27.0	26.0	-	33.74	
17	27.3	-	-	33.91	
18	27.3	26.5	21.4	34.00	
19	27.2	22.5	20.2	34.13	
20	28.1	-	-	34.13	35.33
21	26.1	-	-	34.84	
22	25.9	-	-	35.09	
23	26.4	25.6	24.8	35.14	
24	26.7	-	-	35.39	
25	26.3	25.9	-	35.15	
26	26.6	25.0	-	35.16	
27	26.8	25.2	25.1	35.16	
28	26.5	26.2	25.0	33.73	35.55
29	25.1	24.7	-	35.19	
30	26.8	26.6	24.3	35.13	
31	26.7	25.5	-	35.01	
Mean	26.5	25.4	24.2	34.82	35.44

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$),
 1965 ($33^{\circ} 29.0' N.$, $75^{\circ} 35.5' W.$; water
 depth: 14 meters)--Continued

Month and day	Temperature at depth of--			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
August					
1	26.5	24.9	(24.8)	35.16	
2	26.8	25.5	24.6	35.32	
3	27.0	25.2	24.4	35.28	
4	26.9	25.6	24.2	35.22	36.00
5	27.7	25.0	24.0	35.16	
6	27.5	26.7	23.7	35.11	
7	27.8	-	-	35.40	
8	27.9	27.2	25.0	35.25	
9	27.3	25.7	25.7	35.27	
10	26.9	-	-	35.34	
11	27.5	26.8	24.1	34.93	34.95
12	28.0	26.2	23.8	35.00	
13	27.7	27.5	(23.0)	34.55	
14	27.6	23.8	23.3	34.59	
15	27.3	-	-	34.58	
16	27.5	26.3	22.6	34.94	
17	27.9	26.9	23.2	35.03	
18	26.3	26.3	23.5	34.89	35.36
19	27.7	26.7	24.0	35.26	
20	27.8	-	-	34.94	
21	27.8	-	-	35.19	
22	28.0	26.6	23.9	34.56	
23	27.0	26.7	23.2	35.02	
24	27.5	25.7	23.8	34.78	
25	27.2	26.6	22.2	35.15	36.17
26	27.5	-	-	35.01	
27	27.2	-	-	34.97	
28	27.8	-	-	35.11	
29	22.8	-	-	35.44	
30	24.5	23.9	23.9	35.77	
31	25.6	-	-	36.29	
Mean	27.1	26.0	23.9	35.11	35.62

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{\circ}/oo$),
 1965 ($33^{\circ}29.0' N.$, $75^{\circ}35.5' W.$; water
 depth 14 meters)--Continued

Month and day	Temperature at depth of--			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
September					
1	-	-	-	-	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-
11	-	-	-	-	-
12	-	-	-	-	-
13	-	-	-	-	-
14	-	-	-	-	-
15	-	-	-	-	-
16	28.4	28.4	27.5	36.50	
17	28.2	27.4	26.1	36.44	
18	27.5	27.6	26.1	36.53	
19	27.1	-	-	36.72	
20	26.6	26.8	26.1	36.46	
21	27.7	27.7	27.7	36.50	
22	27.5	27.3	27.0	36.76	(36.38)
23	27.8	-	-	36.52	
24	27.2	-	-	36.64	
25	27.0	27.2	27.2	36.54	
26	27.0	27.0	27.0	36.48	
27	26.9	26.9	26.9	36.73	
28	26.7	-	-	36.73	
29	26.0	26.2	26.3	36.52	
30	26.0	26.1	26.2	36.63	(36.56)
31					
Mean	-	-	-	-	-

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$),
 1965 ($33^{\circ}29.0' N.$, $75^{\circ}35.5' W.$; water
 depth: 14 meters)--Continued

Month and day	Temperature at depth of--			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
October					
1	24.4	-	-	36.76	
2	25.0	-	-	36.47	
3	24.4	24.5	24.6	36.56	
4	24.2	24.1	24.1	36.58	
5	24.0	24.0	24.4	36.58	
6	25.0	-	-	36.69	(36.52)
7	22.2	-	-	36.62	
8	23.5	23.5	23.4	36.56	
9	24.4	-	-	36.57	
10	24.4	-	-	36.70	
11	24.4	24.6	(24.7)	-	
12	25.0	-	-	36.81	
13	24.4	-	-	36.68	(36.39)
14	24.3	24.3	24.4	36.54	
15	24.4	-	-	36.68	
16	23.4	23.5	23.5	-	
17	23.3	23.4	23.4	36.62	
18	23.4	-	-	36.52	
19	23.9	-	-	36.68	
20	24.2	-	-	36.46	
21	25.6	-	-	36.25	
22	25.6	-	-	36.16	
23	25.0	-	-	36.36	
24	25.0	-	-	36.51	
25	23.1	-	-	36.56	
26	22.8	-	-	36.60	
27	24.4	-	-	36.69	
28	24.4	-	-	36.50	
29	23.8	-	-	36.68	
30	23.3	-	-	36.49	
31	24.0	-	-	36.34	
Mean	24.2	-	-	36.56	

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{0}/oo$),
 1965 ($33^{\circ}29.0' N.$, $75^{\circ}35.5' W.$; water
 depth: 14 meters)--Continued

Month and day	Temperature at depth of--			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
November					
1	23.9	-	-	36.61	
2	23.9	-	-	36.55	
3	23.9	-	-	36.58	
4	23.3	-	-	36.72	
5	23.3	-	-	36.63	
6	23.3	-	-	36.76	
7	23.9	-	-	36.53	
8	23.9	-	-	36.80	
9	23.3	-	-	36.42	
10	23.3	-	-	36.74	
11	24.4	-	-	36.31	
12	23.6	-	-	36.65	
13	24.2	-	-	36.18	
14	23.9	-	-	36.44	
15	23.5	-	-	36.46	
16	23.6	-	-	36.52	
17	23.3	-	-	36.37	
18	19.4	-	-	36.70	
19	19.4	-	-	37.06	
20	21.7	-	-	36.54	
21	22.2	22.0	22.0	36.30	
22	21.9	22.0	21.0	36.58	
23	20.9	21.0	21.0	36.53	
24	20.1	20.1	20.2	36.37	36.68
25	20.6	-	-	37.10	
26	21.1	-	-	36.70	
27	20.6	-	-	36.56	
28	20	-	-	36.62	
29	20	-	-	36.78	
30	19.2	-	-	36.63	
31					
Mean	22.3	-	-	36.59	

Table 14.--Frying Pan Shoals Light Station:
 temperature ($^{\circ}$ C.) and salinity ($^{\circ}$ /oo),
 1965. ($33^{\circ} 29.0' N.$, $75^{\circ} 35.5' W.$; water
 depth: 14 meters)--Continued

Month and day	Temperature at depth of--			Salinity at depth of--	
	0 m.	9 m.	14 m.	0 m.	14 m.
December					
1	16.7	-	-	36.49	
2	19.4	-	-	36.66	
3	19.4	-	-	36.61	
4	20.0	-	-	36.54	
5	17.5	-	-	36.68	
6	18.9	-	-	36.66	
7	15.9	16.5	16.5	36.81	
8	19.4	-	-	36.75	
9	19.4	-	-	36.70	
10	20.6	-	-	36.98	
11	20.1	-	-	37.20	
12	20.6	-	-	36.83	
13	22.8	-	-	36.91	
14	22.7	-	-	36.92	
15	22.2	-	-	36.65	36.72
16	22.8	-	-	36.81	
17	20.8	-	-	-	
18	21.1	-	-	36.70	
19	21.1	-	-	36.58	
20	20.0	-	-	36.58	
21	15.6	-	-	36.69	
22	19.4	-	-	36.91	
23	20.6	-	-	-	
24	21.7	-	-	36.65	
25	21.7	-	-	36.92	
26	19.4	-	-	36.89	
27	19.6	20.0	20.0	-	
28	20.6	-	-	36.62	
29	21.4	21.3	21.3	36.47	36.70
30	21.1	-	-	36.90	
31	19.9	19.9	19.9	37.27	
Mean	20.1	-	-	36.76	

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LITERATURE CITED

Bumpus, D.F.

1957a. Surface water temperatures along Atlantic and Gulf coasts of the United States. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 214, 153 pp.

1957b. Oceanographic observations, 1956, east coast of the United States. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 233, 132 pp.

1967. Changes in the seasonal cycle of salinity off the east coast of the United States. Unpublished manuscript. Paper presented at Symposium on Mean Sea Level, 13-14 April 1967. NAS-NRC Washington, D. C. 9 pp.

J. Chase

1959. Wind-induced changes in the water column along the east coast of the United States. J. Geophys. Res. 64(8):1013-1032.

1964. Oceanographic observations, 1961, east coast of the United States. U.S. Fish Wildl. Serv., Data Rep. 1, 176 pp.

1965. Oceanographic observations, 1962, east coast of the United States. U.S. Fish Wildl. Serv., Data Rep. 9, 181 p.

1966. Oceanographic observations, 1963, east coast of the United States. U.S. Fish Wildl. Serv., Data Rep. 10, 173 p.

1967. Oceanographic observations, 1964, east coast of the United States. U.S. Fish Wildl. Serv., Data Rep. 18, 177 p.

Day, C. Godfrey

1959a. Oceanographic observations, 1957, east coast of the United States. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 282, 123 p.

1959b. Oceanographic observations, 1958, east coast of the United States. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 318, 119 p.

1960. Oceanographic observations, 1959, east coast of the United States. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 359, 114 p.

1963. Oceanographic observations, 1960, east coast of the United States. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 406, 59 p.

U.S. Department of Commerce and U.S. Department of Agriculture.

1965. Weekly weather and crop bulletin. Government Printing Office, Washington, D. C. 20402, vol. 52.

1966. Weekly weather and crop bulletin. Government Printing Office, Washington, D. C. 20402, vol. 53.

U.S. Department of the Interior.

1965. Water resources summaries (monthly). U.S. Geological Survey, Water resources Division, Boston, Mass.

U.S. Weather Bureau.

1965. Daily North Atlantic surface weather charts for 1200Z. Airport Station, John F. Kennedy Airport, New York, New York.

1966. Climatological data, National summary, Annual 1965. Government Printing Office, Washington, D. C. 20402.

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